Gleanings in Bee Culture

Established 1873

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60 Years' of Service Your Guarantee of Quality.

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Our warehouse is full of nice new clean stock of Root famous 3-Ply Foundation, Root Quality hives, frames, sections, in fact, everything listed in catalog. Also complete line of Honey Containers (glass and tin), Cartons and Shipping Cases. Write for our Special Prices.

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SERVES YOU BEST

OUR MAKE-UP PRICE FOR

Schmidt's Economy Foundation

IS 13c on **Hundred pounds** or over

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It is Well Worth It

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WE MEET THE BEST (Bona Fide) **OFFER YOU CAN GET** from any commercial foundation manufacturer, if you mail us a copy of the advertisement with date showing it is in force or mail us the personal quotation to you.

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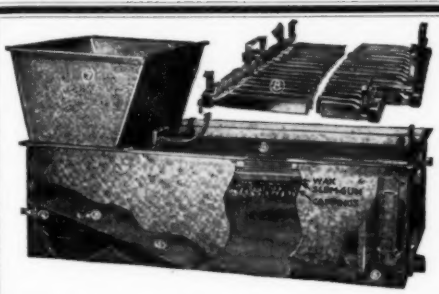

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Eliminates Slumgum Discoloration of Both Honey and Wax

With the Brand Melter, the cappings drop from the knife into the hopper, contacting a warm water compartment, slightly warming the honey. The cappings float along the top of the warm honey, up and under the steam heated melter units. The great bulk of the cappings are melted by contacting the hot liquid wax floating about the melting units. Very little of the honey contacts the melters.

THIS UNDER THE MELTER UNIT FEEDING, pushes up and holds up the slumgum accumulation. The slumgum is not dragged down, agitated and mixed with the honey as it goes to the lower levels, as is the case with TOP FEEDING MELTERS.

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New Construction. Send for printed matter.

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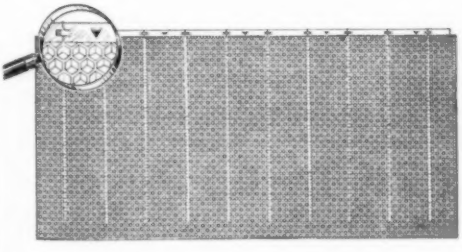

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Our wired foundation is not an imitation of anything that has been designed by others. The original metallic strip will hold up the comb without any nails, will support more weight than any other foundation, and the comb will not slip down on the wires.

Up to the present time this foundation has been made in one size only; however, as we have had inquiries from all over the country for other sizes, next season we will also make wider sizes including those for split bottom bar.

We have had many repeat orders from conservative beekeepers. We thank them for their patronage and for the numerous compliments we received for our product.

$45.00 per 100 lbs.

Making charges $18.00 per 100 lbs. if you furnish the wax.

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At NORFOLK, VA.

A. I. ROOT CO., of NORFOLK, INC.

55 COMMERCE ST.

Prompt Service and Satisfaction

The Monthly Honey Market

U. S. GOVERNMENT REPORT

Information from Producing Areas (first half of June).

California Points: Southern California—The weather has been generally cloudy, with considerable fogginess along the coastal areas but practically no rainfall. Prevailing temperatures were below normal. The sage plants are drying up, and it is reported that there will be little sage honey except within 40 miles of the coast. Bees are being moved to the Mountain States in considerable quantity due to the poor showing so far of bees in sage locations. Buckwheat is in bloom at the lower elevations, but so far is not yielding very heavily. The production of Orange honey is now said to be somewhat larger than was at first expected. Demand for honey reported slow to moderate with a weaker tendency to the market. Offerings by beekeepers reported more plentiful than usual at this season of the year. Sales by beekeepers in ton lots or more, per lb., f.o.b. Southern California points—Orange, new crop, Extra White to Water white 5½-5¾c, late May 5⅞-6c, White 5¼-5½c, one lot off-flavor 4⅞; Sage, old crop, White to Extra White 5-5¼c; Buckwheat-Sage, old crop, Amber to Extra Light Amber 4-4⅝c; Mesquite, Blythe Area, new crop, Extra White to Water White $5.00-5.30 per case of 120 pounds. Beeswax has been generally steady at 19-20c per lb. to beekeepers delivered Los Angeles.

Imperial Valley—Bees are still gathering nectar from alfalfa but extracting will begin during the latter part of the month.

Central California—Temperatures ranged generally below normal, especially in the interior valleys. A very light crop of Sage honey is reported, but prospects are for a fairly heavy crop of Buckwheat. So far, however, buckwheat is not secreting much nectar. Spikeweed prospects are better than usual, and it is already secreting well in most places. Colonies are generally normal and even those that are below par as a result of heavy swarming are improving rapidly. A few apiaries still have to be moved back from the oranges to valley locations. Bees are also working on eucalyptus, yerba santa, honeysuckle and alfalfa. Dealers are said to be in the market for sage and thistle honey with only light supplies available. Honey of Light Amber Mixed Flowers is in moderate supply and a fairly large volume of Eucalyptus and Eucalyptus-flavored honey is being offered, with little demand. Sales to beekeepers in ton lots or more, per lb., f.o.b. Central California delivery points: Orange, new crop, Water White mostly 5¾c, Extra White 5½-5¾c, White 5½-5⅝c, few 5c with cans furnished, Light Amber 4½c; Buckwheat, new crop, Light Amber to Extra Light Amber 4-4½c; Sage, White, new crop mostly 6c, Extra Light Amber, 1937 crop 5c; Eucalyptus and Eucalyptus-Flavored, Amber to Extra Light Amber 3¼-3¾c, some 4c; Light Amber Mixed Wild Flowers 3¼-3¾c.

Northern California—Temperatures have generally ranged below normal. Swarming was excessive following the cold, cloudy weather in early spring. In the Sacramento Valley olive, thistle and miscellaneous sources have given liberal pollen supplies, but nectar has been scarce with feeding often necessary. In the Sierra Mountains creeping sage, wild alfalfa, and wild lilac have yielded some nectar. Buckeye is now blossoming generally and some bees are being moved from buckeye locations

Package Bees and Queens

It's the queen that excells

Let us quote you on your needs

Overbey Apiaries, Bunkie, La.

GARON'S QUALITY THREE-BANDED ITALIAN QUEENS

Scientifically Bred—
Carefully Selected
For the remainder of the season
42½c to Dealers
50c to the Retail Trade

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Donaldsonville. La.

Talk About Ultra Violet Ray Treated Queens!

Just read what this beekeeper has to say about them.

June 14, 1938

Fred W. Muth Co., Cincinnati, O.

Enclosed you will find $1.00 for which send me 2 Ultra Violet Ray treated queens by return mail.

I had some of your queens a few years ago and they were very gentle and wonderful workers. Made 10 supers of comb honey.

(signed) H. A. K. Dixon, Ohio

These treated queens are worth any man's $5.00 because they are more prolific and this treatment increases their egg laying. Their offspring are extremely gentle.

Price, 50c each—any quantity—for the balance of this season.

THE FRED W. MUTH CO.

Pearl & Walnut Sts. "Beemen since 1858" Cincinnati, O.

to avoid trouble from the generous nectar and pollen yield. No extracting of new crop honey, except Manzanita, has yet been reported. Beekeepers are offering light to moderate quantities of honey. There is a good demand for Thistle honey but little is available.

SUMMARY—An abundance of rainfall in the White Clover and Sweet Clover Areas has brought nectar plants along to an exceptional degree. Not in years have clover and sweet clover plants been so abundant nor bloomed so profusely in the White Clover States of Ohio, Indiana and Illinois, with more than usual nectar-bearing plants in the States to the north and in the Plain States. However, cool, rainy or cloudy and often windy weather has kept bees from working to advantage on the available bloom, though in Ohio and Indiana strong colonies have stored 50-100 pounds of surplus honey already, and prospects are for a bumper crop if the weather will permit bees to work. Prospects have changed sharply for the better in the lower Plains States, where bees have been busily gathering nectar during the past two weeks. The outlook is more encouraging in the Mountain States than a year ago. Lack of rainfall is cutting short the fireweed crop in the Pacific Northwest and also the vetch and clover flow. Little Sage honey is being secured in Southern California. Swarming is widely reported to be the worst in years. Feeding has been necessary to a greater extent this spring almost everywhere than usual, if bees were to be kept in good condition, and colonies which were not adequately fed are often very weak or died out completely. Old crop honey is practically exhausted with sales during the last three weeks at a low point. Local demand for honey is less than earlier in the season. Large buyers are making inquiries concerning new crop honey.

Monthly Report of Honey Producers

Early in June we sent the following questions to honey producers: 1. At what price has honey been sold or contracted for, if any, in large lots (carload lots or less) in your locality during the past month for (a) extracted honey, per pound? (b) comb honey, Fancy and No. 1, per case? 2. What are prices when sold to grocers in case lots of (a) extracted honey in 5 lb. pails, or other retail packages in terms of 5 lb. pails? (b) comb honey, Fancy and No. 1, per case? 3. What is the retail price to consumers in your locality of (a) extracted honey in 5 lb. pails, or other retail packages in terms of 5 lb. pails? (b) comb honey, Fancy and No. 1, per section? 4. How is honey now moving on the market in your licality? Give answer in one word, as slow, fair or rapid. 5. How does the number of colonies that are in condition to store surplus honey this season compare with the number of such colonies last year? Give answer in per cent. 6. What is the condition of the honey plants at this time in your locality as compared with the average? Give answer in per cent. 7. What is the per cent of winter and spring loss of colonies (if any) in your licality? Give answer in per cent. 8. What is the present condition of the coloniee in your locality as compared with normal? Give answer in per cent.

State. Name.	Large lots. To grocers. Ex.	Comb.	Ex.	Comb.	To consumers. Ex.	Comb.	Movement.	No. of colo.	Cond. of plants.	Pct. of loss.	Cond. of colo.
SC-Ala. (J. M. Cutts)			.55		.65		Fair	105	100	1	110
S-Ala. (J. C. Dickman)			.45		.52		Fair	80	80		80
B. C. (A. W. Finlay)	.10		.70		.90		Fair	120	100	15	120
C-Calif. (Davis Bros.)			.43		.55	.25	Slow	70	100	2	85
SE-Colo. (Otis E. Adcock)					.50		Fair	100	100	4	125
E-Conn. (Allen Latham)			.75	5.00	1.00	.29	Slow	100	125	1	100
S-Fla. (C. C. Cook)	.06		.40		.55		Slow	125	100	5	100
C-Fla. (Harry Hewitt)	.06		.50		.65		Slow	100	100	2	100
SE-Ga. (J. J. Wilder)	.05½		.50		.65		Fair	100	100	2	100
NC-Ills. (A. L. Kildow)					.50			80	125	20	90
NC-Ind. (T. C. Johnson)			.55	3.60	.65	.20	Slow	100	100	10	100
NW-Ind. (E. S. Miller)			.50	3.60	.65	.20	Slow	100	125	10	100
W-Iowa (E. G. Brown)			.50		.65		Rapid	100	100	10	100
S-La. (E. C. Davis)	.05		.35		.50		Fair	100	75	2	100
C-Mich. (E. D. Townsend)								70	100	25	90
E-Minn. (Floyd W. Ray)	.06½		.45		.57		Fair	85	110	20	80
W-Minn. (B. L. Morehouse)			.50		.65		Slow	85	125	10	85
C-Nebr. (J. H. Wagner)			.53		.69		Slow	100	75	10	100
W-Nev. (Geo. G. Schweis)					.45	.20		100	85	5	100
W-N. M. (C. A. Baltzley)	.06½		.50	3.75	.65	.25	Fair	70	75	25	70
NW-N- Y. (Geo. B. Howe)					.60		Fair	80	100	20	80
C-N. Y. (F. W. Lesser)	.07¾						Fair	80	100	12	80
NW-N. C. (C. S. Baumgarner)			.65		.80	.25	Slow	100	110	10	100
SE-N. C. (W. J. Martin)	.06		.55		.75	.20	Fair	100	100		100
E-N. D. (M. W. Cousineau)	.06½		.50		.54		Fair	90		10	90
C-Ohio (R. D. Hiatt)			.55		.70		Slow	90	150	8	90
NC-Okla. (C. F. Stiles)			.45		.65		Fair	80	100	15	80
W-Ore. (H. A. Scullen)					.48	.17	Slow	110	100		100
C-Penn. (Harry Beaver)			.50		.60		Slow	95	100	10	100
SE-Penn. (D. C. Gilham)			.70	4.25	1.00	.25	Slow	100	120	20	110
W-S. C. (E. S. Prevost)					.67		Fair	90	100	10	90
NE-S. D. (L. A. Syverud)			.40	3.60	.59	.19	Slow	100		15	100
C-Tenn. (J. M. Buchanan)					.75		Fair	100	100	2	100
E-Tenn. (W. L. Walling)					.85		Fair	90	100	0	90
C-Texas (T. A. Bowden)			.50		.60		Fair	100	100	10	100
S-Texas (J. N. Mayes)	.05						Rapid	100	100	8	100
S-Texas (H. B. Parks)	.05		.48		.55		Fair	100	100	10	100
N-Utah (W. H. Hendricks)			.43		.50		Slow	100	100	10	100
SC-Wash. (Chas. Higgins))	.06½			5.25	.52		Fair	100	100	3	100
SE-Wash. (Ryon R. Isbell)			.39		.45	.18	Slow	100	90	3	100
N-W. Va. (W. C. Griffith)					.55	.22	Slow	50	100	2	100
N-Wyo. (Earl C. Reed)			.50		.60		Fair	80	100	20	90

MUTH AT YOUR SERVICE

We hope you have received a good honey crop this season. You will need containers and possibly a good honey extractor. Read over our special prices.

HONEY EXTRACTORS

Double duty 3 and 4 frame honey and cappings Extractor. Have a good, inexpensive honey extractor this year.

3-frame Hoffman size	$13.35
4-frame " "	14.35
3-frame Jumbo Size	14.90
4-frame " "	20.50

FREE—A Muth Bee Veil or one 8½" steel uncapping Knife with either extractor.

60-POUND CANS

Description—5-gallon—60-pound Cans	Price
1 to 10 crates (2-60) used, per crate	$0.65
11 to 25 crates (2-60) used, per crate	.60
Bulk, less than 50 (new), each	.35
Bulk, more than 50 (new), each	.30
Packed in individual cartons, 1 to 50, each (new)	.45
Packed in individual cartons, 50 or more, each (new)	.40
Used 60 lb. cans (bulk) 1 to 50, ea.	.25
Used 60 lb. cans (bulk) 51 to 100, ea.	.20

Special No. 1

MEDIUM BROOD (plain)

8x16¾ and 8 9/16x16¾

Average over 7 sheets to lb.

25 lb. boxes per lb.	$0.42
100 lb. boxes per lb.	.40

2-BEEWAY SECTIONS

No. 1 Grade 4¼x4¼x1⅞	$5.70 for 500
No. 2 Grade "	4.95 for 500
No. 1 Grade " (split)	6.35 for 500
No. 1 Grade Plain Sections	5.25 for 500

(Allow postage when ordering by parcel post)

QUEEN BEES

Requeen NOW

Ultra Violet Ray treated queens have been tested and proven by the American Beekeepers to be the most prolific egg layers (30% above normal) and their offspring extremely gentle. Over 150,000 Ultra Violet queens used by beekeepers.

50c EACH

MODERNISTIC GLASS JARS

Description	Per Case	10 Case Lots Each
6½-oz. jars, packed 2 dozen	$0.70	$0.68
16-oz. jars, packed 2 dozen	.85	.83
32-oz. jars, packed 1 dozen	.80	.78
48-oz. jars, packed 1 dozen	.85	.83

Special No. 2

10 fr. BODIES WITH FRAMES

(standard Hoffman)

10 Bodies with frames, each	$1.00
25 Bodies with frames, each	.90

THIN SURPLUS FOUNDATION

(standard sizes)

5 lb. lots	$0.65 per lb.
25 lb. lots	.57 per lb

(Allow postage when ordering by parcel post)

Ship us your old comb and cappings for rendering into beeswax. Our charges are 3c a pound from the price of the rendered wax where your shipment of old comb is less than 100 lbs. On 100 lbs. or more 2c a pound. We pay the highest market price for beeswax.

WRITE FOR OUR LOW PRICES OF WORKING YOUR WAX INTO COMB FOUNDATION

HONEY WANTED

We will buy your white and amber extracted honey, also Fancy comb honey. Write and tell us what you have to offer along with samples of extracted honey. Upon receipt of your shipment we make immediate remittance.

The Fred W. Muth Company

229 Walnut Street "Beemen since 1858" **Cincinnati, Ohio**

HONEY EXTRACTORS ?

If you are in the market for a honey extractor, write me for literature on my new 2-frame reversible machine. My price is so reasonable that you can not afford to buy a smaller machine and it is so rigidly constructed that you will not want to pay more.

The Walter T. Kelley Co.

Paducah, Kentucky

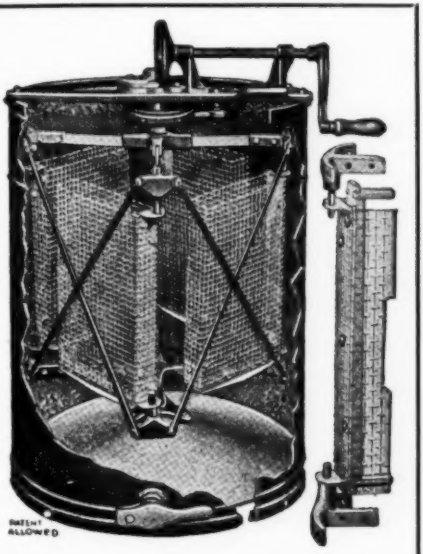
Manufacturers of Bee Supplies

Removable Reversible Basket Honey Extractors

Our Style 15-4 Extractor shown here has 4 Removable Reversible Baskets for Standard 9⅛" frames, that can be lifted up and out to clean or disinfect in boiling water. The gears are always in mesh, with ratchet crank and brake, and is the easiest to turn of any 4-basket extractor on the market.

It is priced at $32.50. Shipping weight, 130 lbs.

This is only one of 10 different styles ranging from 2 to 50 frame sizes. Send for printed matter.



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Look better, last longer, cost less. Protection from fire, lightning, wind and weather. Send roof measurements today for money-saving price, freight paid. **Ask for Catalog** 89-G.

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All Costs Considered, Dadant's Crimp-wired Foundation is the Cheapest

The Experience of D. S. Jenkins, Salt Lake City, Utah

"I took the pictures of these combs with a Leica camera. The combs are built from Dadant's Crimp-wired Foundation and not a settled or sagged place in them. The reason is plain. The crimps in the wires give the wax many angles or braces to support it, both vertically and horizontally.

"Anyone who uses cheap foundation is deliberately adding more costs to his beekeeping. Dadant's Crimp-wired Foundation is the cheapest, all costs considered. And this is particularly true over a ten year period. Even with care and a good flow, it is difficult to get all worker combs from any foundation that lacks a quarter to a half inch of reaching the bottom bar. A few drone cells or places where there is no comb will always appear, even when the combs are built over a super in a flow.

"However, with Dadant's Crimp-wired Foundation in Lewis slotted bottom bar frames, built during a flow above the brood, the chances are excellent that the combs will be perfect."

DADANT & SONS, Hamilton, Illinois

Makers of Dadant's Famous Foundations

Crimp-wired—Plain—Surplus

BEESWAX WANTED. We buy at all times. Send a card stating quantity you have to offer.

Vol. 66
No. 7

Gleanings
in Bee Culture

July
1938

The Two-queen Hive

C. H. Gilbert
Wyoming Experiment Station

Its Success is Based Upon Increased Bee Population in Each Unit

Fig. 1.—All single-queen hives in one of the apiaries of the Wyoming University.

The two-queen hive has created widespread interest and has been the subject of much discussion in recent years. Many articles have appeared in bee journals, and newspapers have carried glowing accounts of increased honey production. The layman who reads these various accounts probably gets the idea that the beekeepers have suddenly discovered a gold mine. The method may appear new and revolutionary to some, but its use probably dates back many years in the history of beekeeping.

The two-queen method, or variations of it, has been employed at the Wyoming Experiment Station for the past ten years for requeening and as a swarm control measure. When the colonies to be requeened have become sufficiently strong, the brood is divided. The two brood nests are separated by "spacer" supers and queen excluders. A top entrance is always provided in the rear of the top super. The above procedure is essentially the same, whether a new queen is to be developed, a mated queen is to be introduced, or when the manipulation is for swarm control. In any case, only strong colonies should be used. When a new queen is to be developed no further manipulation is necessary. If a laying queen is to be introduced, all queen cells must be destroyed. When the manipulation is for swarm control, the cells must be destroyed, but, if a top entrance has been provided, no harm will result if a cell is overlooked.

The method has given good results of the Wyoming Experiment Station. Colonies manipulated in this manner as a swarm control measure become stronger than normal colonies. When brood is raised two or more times during the summer, the colonies become very strong and honey production is increased. However, colonies in which queens are mated and thereafter operated as two-queen colonies become stronger than those in

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Fig. 2.—One of the apiaries in which single-queen and two-queen colonies were compared.

which brood is raised and all cells are destroyed. Likewise, colonies receiving mated queens become stronger than those required to develop their own queen.

Production records over a period of years rate the colonies in the following order: First, brood raised, mated queen introduced, operated entire season as two-queen hive; second, brood raised, cells not destroyed, queen developed in hive, operated with two queens balance of season; third, brood raised, all cells destroyed, single queen colony entire season.

While in our experiments increased honey production has always been in favor of the two-queen hive, there are many disadvantages to the method.

The two-queen hive is now being highly recommended by some as a way to reduce production costs. In looking at the situation the following facts should not be ignored. The present low price received for honey has forced the beekeeper to increase the number of his colonies. Operating large numbers, in an effort to cut production costs, he finds it convenient and economical to use standard equipment throughout. Special hives are expensive, and if two queens can be operated successfully in standard equipment, it is very desirable to do so. Large producers have developed a definite routine of manipulation designed especially for their locality. The two-queen hive may not fit into their system of management.

The success of the two-queen method is based upon increased bee population in each hive or larger units. Since there are two queens and two brood nests in each unit, more time is required for manipulation.

During the heavy honey flows, the large units must be manipulated more frequently than single queen colonies, because of the demand for additional super room. The danger of over-crowding becomes acute, and two-queen colonies cannot be neglected.

Upper entrances must be provided either by special inner covers or by cutting holes in the upper supers. The special entrance is removed each time the colony is manipulated, and considerable confusion results as field bees returning are unable to find their hives.

Two queen colonies can be operated with fewer covers and bottoms, but super requirements cannot be reduced. They are expected to produce more honey. Therefore, additional super room should be provided.

Beekeepers who contemplate using two queens in standard hives must not overlook the fact that they require more attention than single queen colonies. If the method is to be employed, yard labor must be increased or the number of colonies decreased.

The method of colony management employed at the Wyoming Experiment Station provides a large brood chamber and unlimited super room. Heavy honey flows in our locality may be of short duration and, with daily weight increase of 15 to 25 pounds, a large number of supers are required. Such a honey flow, when it occurs, lasts only a few days, and if the supers are not on the hives the bees cannot take advantage of it. A heavy flow of short duration may be missed entirely, unless extra supers are on each colony when the flow starts. Beekeepers sometimes discover their colonies are crowded and begin supering when, as a matter of fact, the honey flow is over.

One of the University apiaries, all single queen hives, is shown in Figure 1. It will be observed that a large number of supers are provided. When this system of supering is employed, it is readily seen that two-queen colonies would be stacked far too high for convenience. One of our apiaries in which single queen and two-queen colonies were compared is shown in Figure 2. The four in the center are two-queen hives. It will be observed that the single queen colonies have practically the same super room as two-queen colonies. It is very difficult to add supers or manipulate such colonies.

In order to inspect either brood chamber or to adjust the supers, the upper unit must be entirely removed. It is practically impossible to provide extra supers, and therefore frequent

manipulations are required during a heavy honey flow.

Since two-queen colonies produced more honey, further experiments were conducted in an effort to eliminate some of the undesirable features.

Twelve strong colonies were selected for the test. Four of these were manipulated normally as single queen colonies. The brood in eight colonies was raised, and a young laying queen introduced into each upper unit. The eight colonies were manipulated as two-queen colonies until

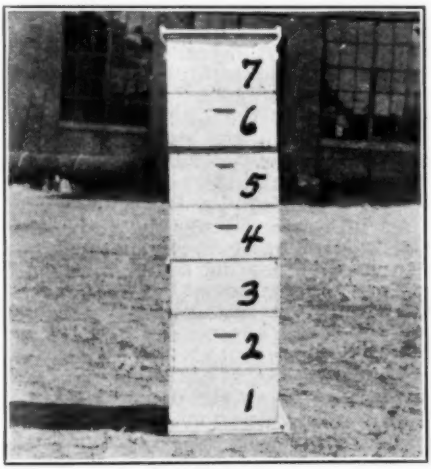


Fig. 3.

the queens were well established and each unit had a good force of bees. Four of the two-queen colonies were then divided into eight separate units. Four units retained the old queen and four had the new young queens. Divisions were made in the afternoon, and in the evening all colonies were moved to a new apiary. The following colonies were placed in the new location: Four single queen colonies; four two-queen colonies; and eight single queen division units.

The results of two years experiments rate the colonies for honey production as follows:

Eight division units	1st
Four two-queen colonies	2nd
Four normal single queen colonies	3rd

In computing results the honey produced by each group was credited to the four original queens, or 12 queens in all.

The method proved to be very satisfactory, and honey production was increased. Many objectionable features of the two-queen hive are eliminated when divisions are made. Supering and subsequent manipulations are carried on normally as single queen hives.

Methods of Making Divisions

If the colonies are all to be moved to a new location, the problem is a very simple one. The two-queen hive (Fig. 3) is divided into two separate equal units and left one on top of the other. The entire apiary can be moved when convenient. All top entrances are closed when the colonies are moved to the new location and are not re-opened.

When it is undesirable to move the colonies to a new location after dividing, the method shown in Fig. 4 may be employed. The two-queen colony (Fig. 3) has a queen in supers 1-2 and 6-7. Bees in the upper unit use the top entrance, and those in the lower unit the regular lower entrance. The lower entrance is not disturbed when division is made. A bottom board is placed behind the original hive and, after equalizing the upper unit (Section B, Fig. 4) is placed upon it. The two queens now head separate colonies which are back to back and as close to each other as possible. The queens are in the lower hive bodies of each colony and supers are added immediately.

The rear unit is provided with one or two extra supers, so that it is higher than Section A. The original top entrance is placed on top of Section B, and for a time bees will use

(Continued on page 463)

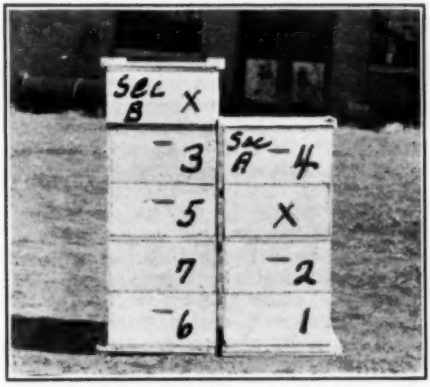


Fig. 4.

Old Queens for Cell-building

Marjorie Wise

The Age of the Queen is Very Important in Getting Good Cells

After having built a colony of bees to the cell-building stage, how long can we keep them in that mood? Many queen breeders use the swarm-box method, and we see all sorts of interesting additions to that plan. The methods which follow closely nature's laws are generally more likely to produce superior queens. Since queen rearing has become such an extensive business, it is necessary to use artificial means to produce enough queens.

Here is a plan which may be used commercially and yet produces better queens: Choose a colony headed by a 3-year-old queen. She should be of good stock, and in these days of high-pressure beekeeping she would doubtless have to be good to have lived that long. Strengthen the colony by adding brood and bees as you see fit. Feed if it seems advisable. If the colony is not already in two hives, add a hive of brood. When ready to start cells, divide the colony by placing the top hive, queen, and a few frames of brood on a bottom-board directly behind the old stand. The lower hive should be full of brood and honey. Remove two or three frames to allow space for the cell bars. Space the frames as they will be when the cell frames are in place, so the colony will not need to be disturbed later. Unsealed brood should be next to cell bars for there we will find the most nurse bees. Leave the colony alone for at least an hour and, preferably, two hours. Then prepare the grafted cells and place them quietly in the spaces left for them. Use no smoke this time unless absolutely necessary. When feeding, place a pail feeder over the inner cover, and protect it with an empty hive body. Thus more feed can be given without disturbing the colony. Do not examine the brood nest for forty-eight hours unless necessary.

The bees will start some cells on the brood, and these may be killed any time before the grafted cells are ripe. Or, if you use a nurse colony after the cells are sealed, the natural cells must be killed before replacing the old queen. This colony can continue the care of the cells the full ten days. Colony morale will be better if the hive containing the old queen is placed over an excluder on the cell-building colony after four or five days. **Here the age of the queen is very important.** A young queen with only an excluder between the two hives would spoil everything. If another super is introduced between the hives, the cells will remain safe, but that makes manipulation more complicated. A 3-year-old queen, no matter how ambitious she may be, will hold the colony together, and still not cause the bees to tear down the cells below the excluder. She is old enough for supersedure, but, due to manipulation, the bees never seem to get around to it. By starting the cells in a full colony, the field bees continue to bring in honey and pollen, so that feeding is not necessary if there is any honey flow.

This full operation may be repeated every ten days, or oftener, by using a nurse colony in connection with it. The old queen must have opportunity to mingle freely with the bees for at least one day between graftings to keep the colony normal. When starting new cells, raise sealed brood from the lower story, and place unsealed brood from the upper story facing the space for cell bars. A vigorous queen will keep up the brood supply without further additions to the colony, but she must be removed to another stand until the cells are surely accepted.

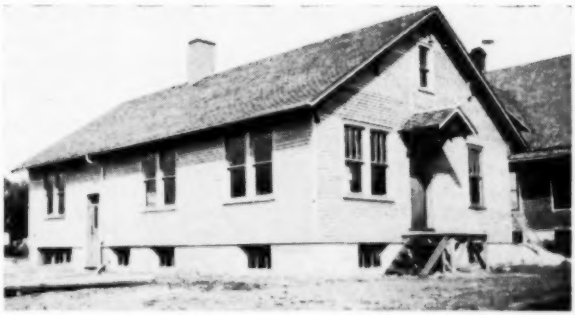
Just a word about the ancestry of this old queen. All rules fail sometimes in queen rearing. One time I used a colony headed by a hybrid queen for cell-building. The season was very unfavorable for queen rearing, but I succeeded in getting quite a number of cells accepted. After the cells were placed in maturing nuclei, some were very slow in hatching. The larvae grafted were good Caucasians, and the queens which hatched on time were very fine. The later ones in the same batch were distinctly hybrids. Evidently some of the grafted larvae were allowed to die, and then, due to a change in weather or feed, the bees decided they needed more queens

(Continued on page 465)

A New Honey House?

Gordon A. Bell

The Entire Cost Was $2,000.00, With Nothing "Skimped"



Well designed and well built, this honey house has a ready re-sale value.

There are thousands of beekeepers and there are just that number of buildings used for handling honey. Very few are well designed or built so the great majority must be the opposite.

The writer has noticed the average commercial beekeeper's chief ambition is more bees with good bee and automotive equipment. Assuming that location and ability are combined with good equipment, there is still one more link that prevents many beekeepers from operating at a profit—namely, a suitable building.

Beekeeping has been and is more or less a migratory business, but a building is as important for success as any other one thing. Many with every chance for success fail to show a profit over a period of years, because they imagine they are "getting by" in a building not suited for the purpose.

The extra labor needed to handle the crop in a "shack" will run from 30 per cent and higher, over the same labor needed to handle that crop in a suitable building.

How a beekeeper can figure he is "getting by" in a "shack" any more than he can get by with worn-out trucks is more than I know.

The picture shows the third honey house the writer has built in that number of states during the past fifteen years.

Re-sale Value Should Be Considered

The first thought in building a honey house is its re-sale value in case a move is necessary. Why not rent? That is very good provided a suitable place can be had. Most locations find nothing available so the beekeeper must build. Why not throw together a cheap shanty with tar paper covering so if one moves little loss is taken? Unfortunately, such a building requires a floor, roof, and four walls with windows, doors, and many other items of expense. Its re-sale value is zero and salvage the same.

Why not put a little more into it and make the "shell" of a cottage or other building that has re-sale value in your vicinity?

My first experience with renting was not satisfactory, my second with erecting a cheaply constructed building was not so cheap, and my third, I believe, is the answer to housing troubles.

Every part of the U. S. has a housing shortage, both now and for a long time to come. Why not put up the "skeleton" of a small, re-salable cottage properly designed, built and located. It has, of course, a floor, roof, and four walls (the same as a shack) but the little extra cost gives me a nice honey house and a salable property.

The pictures show a 26x44 structure with a full basement and an incline entrance for a truck. The siding used was 4-inch with paper and ½-inch sheeting underneath. The 2x4's are spaced 16 inches from centers so it has the beginnings of a well made house. If a move is necessary, a new owner can be found easily.

This property, for my purpose, is divided crosswise into three large rooms by using corrugated boxes of no value or cost.

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The first room holds two or three large truckloads of supers, and with a stove, extracting proceeds, no matter how cold the honey was when brought in. The middle room finds the extractor and wet comb storage. The third room provides living quarters for the owner or helper.

The honey runs by gravity to tanks in the basement where all packing is done. The inclined truck entrance makes easy loading.

Basement for Wintering Bees

The honey being all out of this basement by November 1st, leaves it ready for 300 or more colonies of bees for the winter. By making the basement deep like this one, large windows let in plenty of light. It has twelve windows 12"x18", three lights, besides the windows in the garage doors.

Another very important advantage of a deep basement (this one is

A good basement with plenty of light is an asset to a honey house.

eight feet ten inches under the joists) is that the ceiling is nailed to the floor joists to make it permanent. Also the walls will be banked with straw with several windows fixed so they can be easily opened to lower the temperature in emergencies. The capacity is approximately 350 to 400 colonies. The large chimney serves the boiler in season and provides ample ventilation for the bees in winter.

That basement cost less per cubic foot of space than the first story and to the beekeeper is more valuable than any other part of the house.

Four steps to the left of the grade door takes one into the house while ten steps to the right takes one down to the cement floor. Sawdust is used on the floor to keep it clean while the bees are in the room.

The attic provides space to store one half carload of tin cans and little used articles.

The entire cost was $2000.00 with nothing "skimped". Ten-inch concrete walls with plenty of rods give a real job, safe from cracking or trouble of any kind. Fir lumber was used inside where strength is needed and cedar and pine where exposed to the elements.

Every farm, village, and city throughout the country needs buildings, so why not build that honey house so it can be sold at any time for other uses?

Do not skimp on material or labor as a few dollars saved during construction generally means many dollars lost later.

By all means hire at least one good, top-grade building mechanic even though he wants ten dollars a day and pass up the cheap men who mostly are just plain board butchers. Such men lack ability and are slow, so when the bills are being paid one finds they were not cheap by a mile.

With my building two men can do as much as three or four men can do in a shack at handling the crop. In five years that building will be paid for with savings in labor with a 500 colony bee outfit. In that period of time rising building costs will probably cover my depreciation charges.

Properly constructed buildings for beekeepers cannot become "a white elephant" in any part of the country if they are built suitable for other purposes.

Can any commercial beekeeper afford to just "get by" with any old building? I am very sure of that answer.

A HANDY DEVICE

Mr. Archie Coggshall, of New York State, originated this device for lifting one or more supers of honey.

Quick, Easy, and Delicious

Mrs. Benjamin Nielsen

Hot Summer Weather

Calls for Dishes

Conveniently and Quickly

Prepared with Honey

Serve coconut pudding with delicious honey scotch sauce.

Dishes that are easily and quickly prepared are in great demand by the homemaker during spring and summer months when gardens, flowers and many other outdoor activities make demands upon our time and energy. This is particularly true of desserts. They must be attractive to the eye and light in character, in contrast to the more substantial dishes that have preceded them.

If tasty dishes can be planned in advance, made in the cool of the mornings, and tucked away to await demand, so much the better. As an aid to this idea, gelatin, both plain and fruit flavored, is a boon to busy homemakers. Ever a good mixer, gelatin is doubly delicious in honey combinations.

In making fruit-flavored gelatin combinations, the process will be hastened if part cold water is used. I usually use one-half of the liquid cold. Fruit juices may replace all or part of the water and a bit of experimenting with various juices will produce deliciously different flavors in addition to the food value they impart. With either type of gelatin, the setting process may be hastened by chilling in individual molds.

Strawberry Charlotte

Simple and quick to make Strawberry Charlotte is festive enough for a party treat. But once the family has sampled it you will not be able to keep it for party use. And, if you haven't already broken your New Year's resolution to watch the calories you will when you taste this! For it you will need: one package strawberry flavored gelatin, 1 cup hot water, ⅔ cup cold water, ⅓ cup honey, ⅛ teaspoon salt, 1 cup whipping cream and ¾ cup finely chopped pecan meats. Dissolve the gelatin thoroughly in the hot water; add the honey and salt, then the cold water. Chill until slightly thickened, then fold in the cream which has been whipped until thick but not stiff, and the nut meats. Turn into mold and chill until firm. Serves 8 very generously.

Gelatin treats are limited only by the number of flavors available, the variety of fruits obtainable, and one's imagination. There are so many attractive and inexpensive molds from which to choose that there need be no monotony in the form in which these dishes are presented. A ring mold makes an especially attractive dish and one easily served.

From the following basic recipe many variations may be worked out: One package of any desired fruit flavored gelatin, 1 cup hot water, ⅓ cup honey, ⅔ cup cold water, 2 tablespoons lemon juice, ⅛ teaspoon salt and any desired fruit or combination of fruits. Dissolve the gelatin in the hot water, add honey and salt; mix thoroughly then add the cold water and lemon juice. Allow to chill until slightly thickened, then add the fruit and pour into mold. Chill until firm. Serve with whipped cream slightly sweetened and flavored with a bit of honey.

Honey Chocolate Cup Cakes

Topped with delicious honey icing these cup cakes make a perfect accompaniment to fruited gelatin. Assemble: One-fourth cup shortening, ½ cup honey, ¾ cup sugar, 2 eggs, 2 cups cake flour, 1 teaspoon soda, ¼ teaspoon salt, 2 squares of unsweetened chocolate, 1 cup sour milk

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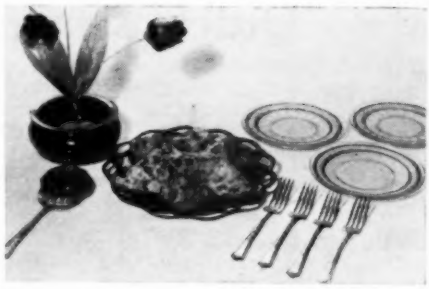
or buttermilk and 1 teaspoon vanilla. Cream the shortening, gradually adding ½ cup of the sugar; then the egg yolks and beat until light and fluffy. Gradually add the honey and vanilla, beating constantly. Then beat in the chocolate which has been grated and melted over hot water, then cooled. Sift the flour, measure and resift four times with the soda and salt. Add the flour mixture alternately with the buttermilk or sour milk, beginning with flour and ending with flour. Beat egg whites until fluffy, add remaining sugar gradually and continue beating until smooth and quite stiff. Fold into batter carefully but mixing well. Fill greased muffin tins or paper baking cups about ⅔ full. Bake 20 to 25 minutes in a moderate oven, 350 degrees F. Spread with icing made by creaming ¼ cup butter until soft, gradually work in about 2 cups of confectioners' sugar and 2 tablespoons of thin cream, 2 tablespoons honey and a few chopped nuts, if desired.

Summertime Pie Crust

We call it our "summertime pie crust." And with two or three stored in the refrigerator one may have pie in a jiffy with little effort—a most desirable help in the summer. To make one of these crusts: crush 18 graham crackers rather fine, blend with ¼ cup honey and ½ cup (scant) of butter. Pat firmly into a pie plate and chill thoroughly before adding the filling. This makes one crust for a 9-inch pie plate. If individual servings are desired, mold crust in muffin tins to chill.

Select the gelatin with the flavor most appropriate to the fruit you intend to use, prepare it the honey-way, adding a bit more fruit than usual and pour the mixture into the thoroughly chilled crust. Allow to chill until the filling is firm. Cut in sections and serve with a fluff of honey-sweetened whipped cream and you have a delicious pie. Fresh strawberries and peaches are especially tasty in this quick pie.

Honey chocolate cup cakes are a perfect accompaniment for fruited gelatin.



Strawberry Charlotte will make you break your New Year's resolutions to watch the calories.

Coconut Pudding

This is a bit more substantial than the foregoing recipes and is best after a light lunch. For this, assemble: One cup milk, ½ cup brown sugar, ¼ cup honey, 1 tablespoon unflavored gelatin, ¼ cup water, ⅛ teaspoon salt, 2 cups shredded coconut, chopped fine, 2 cups whipping cream and 1 teaspoon vanilla. Heat the milk and sugar to the scalding point in a double-boiler. Add honey, salt and the gelatin softened in the cold water. Then chill until syrupy and beat to a froth with a rotary egg beater. Add coconut and vanilla and fold in the cream which has been whipped until thick but not stiff. Mold and allow to chill. Serve with the following sauce.

Honey Scotch Sauce

One cup honey, ½ cup boiling water, ¼ cup butter, 2 tablespoons cornstarch, 2 tablespoons lemon juice, ⅛ teaspoon salt and 8 marshmallows, cut in small pieces. Melt the butter in a saucepan. Remove from heat, add cornstarch stirring until smooth; add the honey and water. Return to heat and simmer slowly for five minutes. Add salt, lemon juice and the marshmallows. Remove from heat when marshmallows have melted. Serve warm.

You may wish to increase or decrease the amount of honey in these recipes, depending upon personal taste and the honey used. It won't be difficult to do and it is lots of fun to experiment. Perhaps these few recipes will suggest other combinations to you. And good luck to you!

Aurora, Nebr.

Prof. W. E. Dunham

Insect Pollination of Alsike Clover

Prof. W. E. Dunham
Extension Specialist in Bee Culture for Ohio.

Much credit is due Prof. Dunham for the progress that has been made in Ohio beekeeping during the past decade. In addition to his bee extension work Dr. Dunham teaches beekeeping in the Ohio State University and conducts a correspondence course in beekeeping.—Editor.

Because of the wide distribution of alsike clover over the state and the exceptional fine stands of this clover, many farmers are planning to grow alsike seed this season.

Alsike clover is not self-pollinated, but must be cross-pollinated to insure seed set. Experiments have demonstrated many times that pollinating insects are the only means by which pollen may be transported from one blossoming plant to the stigmas of another blossoming plant thus accomplishing what is termed cross-pollination.

One acre of alsike clover bloom represents an enormous number of individual florets all of which must be cross-pollinated before maximum seed production can occur. A survey of 1936 in four counties revealed that one acre of bloom may represent from three hundred million to five hundred million florets. Since the blooming period is influenced by weather, but seldom extends more than six weeks, it is obvious that an abundance of pollinating insects must be present to insure thorough cross-pollination.

A survey conducted in 1936 in the alsike seed growing areas revealed an alarming scarcity of natural pollinating insects (excluding honeybees). During 13½ hours of collecting insects on alsike bloom only 49 specimens were obtained. Forty-two of the total number were solitary bees, five were flies and the remaining two were bumblebees. The honeybee is the only pollinating insect which can be controlled economically. Not only is it possible to control the number of bees in an individual hive, but by the aggregation of 50 to 90 hives in one location the total insect population necessary to insure maximum seed production can be controlled. The concentration of this number of hives would represent 4 to 7 million potential pollinating insects available for pollinating service within a restricted area. Normal stands of alsike clover grown under favorable soil and weather conditions have yielded from 6 to 8 bushels per acre when such stands are located in the near proximity to the number of hives mentioned. The average seed yield per acre for the state is less than half this amount.

Because of the number of hives necessary to insure clover pollination, the renting of hives for this purpose might be prohibitive. Since alsike clover represents one of the major nectar secreting plants, commercial honey producers are interested in areas where this clover is grown extensively. The logical approach to the solution of the pollination problem in areas where the insect population is low would be cooperative efforts between seed growers and honey producers. Commercial beekeepers could probably be induced to establish yards at the desired locations if seed growers within a locality or district would assure them of an adequate acreage of alsike, alfalfa and sweet clovers. This would insure an adequate bee population for maximum seed yields.

The value of the pollinating services rendered to the agricultural community would be 10 to 15 times the value of the honey harvested by the honey producers.

Columbus, Ohio.

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The Merits of the Egyptian Bee

Dr. A. Z. Abushady, Editor "The Bee Kingdom"

A great mistake common to many text books is mere imitation and copying, when original reliable experience is what is needed. As a result, a lot of unreliable information is being widespread from one generation or community to another, notwithstanding recent scientific investigations. One of the victims to this traditional authorship is *Apis facista*, the Egyptian honeybee.

Enough has been written against Egyptian bees that I need not dwell on their disadvantages, but I shall deal forthwith with their advantages; and I shall remind my readers that these bees substantially support the honey industry in the land of the Pharaohs with half a million colonies.

I am sufficiently known as a champion of grey bees (Carniolans and Caucasians) which I regard on the whole as superior to yellow bees (Italians, Egyptians, Cyprians, etc.), so I have no object in writing these notes other than to correct faulty knowledge and to give Egyptian bees their due.

In the first place these bees are rightly regarded as the prettiest bees in the world. Taking advantage of this fact, I advocated many years ago in England and elsewhere utilizing them for cross-fertilization, in order to produce some commercially attractive and yet productive bees. As a result, we have in this country the Carnio-Egyptian bees (pure Carniolan virgin mated to an Egyptian drone) as among the finest bees obtainable in production, appearance, and temperament, though they are not so gentle as pure Carniolans or Caucasians.

Secondly, Egyptian queens are very prolific. Hence bee-breeders readily appreciate them for nuclei formation. This feature is also shared by Cyprian bees.

Thirdly, Egyptians readily respond to queen-rearing, e.g. by Dr. Miller's method, thus easily providing hundreds of queens, each of which in the presence of grey drones (Carniolans or Caucasians) is of potential value and of equal merits to the Carnio-Egyptian first cross.

Fourthly, these bees are certainly productive for run honey, though a failure for sections. But like all yellow bees they are generally unsuitable for out-apiaries. Through selective breeding in modern hives, instead of the restricted antiquated mud tubes, it has been possible to raise strong productive colonies of pure Egyptians with fairly good temperament, particularly in such a mild climate as that of Alexandria. Similarly, it has been possible to increase the size of the individual bees by 25% through breeding in *Mellifica* combs and particularly in artificial combs (both aluminum and celluloid) which are popular in Egypt. This adds to the pleasure of seeing no propolis in an Egyptian hive, as *Apis facista* does not generally collect it.

The two main objections raised against Egyptian bees were their irritable temper and their swarming tendency. But, through selective breeding in modern hives, we have now Egyptians that are easily comparable to Italians in temperament and productivity, and yet of finer appearance. The mild coastal weather seems to be ideal to them, but I doubt that they will behave similarly in cold climates. Hence I prefer to restrict my recommendation to their first crosses. My absolute recommendation, however, I accord only to Alpine Carniolans and Mountain Caucasians, and particularly the former. These are the bees which are ideal for the busy honey producer who has no time to waste with vicious bees of any sort. I have already dealt with this subject in more than one paper and lately in the "Bee Kingdom" for March and April, 1938, and in "Bee Craft" for May, 1938.

There are many fancies written about Egyptian bees, such as the presence of "half-queens," their refusal to accept new queens, and the like, but such are the dictates of inexperience or traditional fables and they may be now readily discarded.

Finally, may I say that those of your readers travelling this way (as others have done before) are certainly welcome to visit our Experimental Apiary and to exchange views and experiences, apart from that cordiality for which beekeepers are everywhere noted.

Alexandria, Egypt.

Cross Bees

H. S. Rogers

The Keeper of Vicious Bees is Doing the Bee Industry an Injury

The keeper of cross bees is doing grave harm to the entire beekeeping industry. His bees have given bees as a whole a terrible reputation! We read under headlines of bees stinging a passing horse to death, or even of a hapless chicken being stung to death when strolling too near the apiary! Stories of this type are given prominent places in the news. Even the cartoons and "funnies" make large use of bees stinging. Hence, as a rule, people are not simply afraid of bees, they are actually terrified by the presence of bees. Their fear is violent and unreasoning.

As a result of this fear it becomes increasingly difficult to find an apiary site. Many farmers will not allow a colony of bees on the place. They have read of bees killing horses, chickens, or stinging people seriously or they have had experiences with such bees. There is no use trying to reason with such fearful people. They are frightened even at the sight of a bee on a blossom and seemingly expect it to attack them on sight. Similarly the neighbors, even though they may not see a bee, are frightened even upon seeing bee hives in the distance and make complaints. In one case I got frequent complaints on an out-apiary until surrounding shrubbery grew tall enough to conceal the bee hives from the road, whereupon the complaints stopped. The bees had not injured anyone, but so long as people could see the beehives, they were worried.

From the beekeepers' own point of view, cross bees are a nuisance, and because of the necessity for being extra careful, slow down the work. My own particular pet peeve is to open a colony and then have bees from that colony follow me around all the rest of the day, shrilling their high pitched, shrewish threats in my ears!

Frequently it is not necessary to open a hive at all, but an inspection of the activity at the hive entrance will tell all it is necessary to know. It is convenient to be able to walk through the apiary without use of a veil and gloves. In hot weather these protections are hot and uncomfortable. With satisfactory bees, we can get along without them except for occasional manipulations.

There is no point in keeping cross bees other than the points of their own stingers! My records do not show any correlation between stinging ability and honey-gathering. My very poorest colonies have been very cross. Quiet bees that are excellent workers can be obtained.

Caucasian bees have the reputation of being quiet, but more important in avoiding trouble is their characteristic of minding their own business. They may sting if the hive is opened and if they are improperly handled, but when unprovoked, they do not fly out to attack passers-by. The innocent by-stander can stroll by unmolested. Two of my apiaries are in horse pastures and the bees do not fly out to attack passing horses. Similarly a man can walk through the apiary without the need of a veil.

The quietest colony I ever had was a Caucasian-Italian hybrid that could be handled without smoke, veil, or gloves even in rainy weather. This extreme gentleness is rare, but at the other extreme the cross colony can be made equally rare. Whenever a cross colony of bees is found, it should be requeened immediately with better stock. That means **immediately** and not next month! It is not desirable to have drones carrying this quality around the apiary because of the danger of transmitting it by heredity.

There is no excuse for keeping vicious bees. They are harder and slower to handle. They are no better as honey-gatherers, if they are as good. The keeper of vicious bees is doing the beekeeping business a real injury by causing trouble and by fostering a reputation for the bees that will result in harm to all beekeepers.

Chicago, Illinois.

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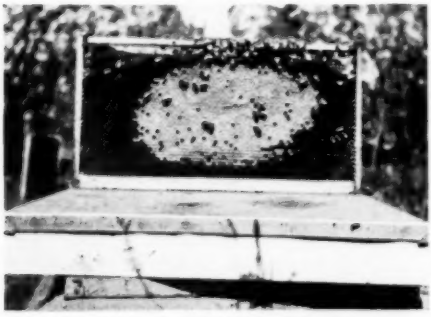
From the Field of Experience

MORE ABOUT PACKAGE QUEEN SUPERSEDURE

C. M. Isaacson

To the much discussed question of queen supersedure I would like to add a few words. In the first place, I don't agree with Mr. Floyd that disturbance of the package colony by the beekeeper is the cause in large measure. In fact, I will go far "out on the limb", considering his very much greater experience, and say that inspecting a colony **after a queen is laying** very rarely, if ever, causes supersedure. I have looked over dozens of hives almost immediately after the start of egg laying by newly introduced queens with no resulting harm. On the other hand, I have followed the orthodox "let-alone" system with packages and had very much trouble. I think the editor in his February editorial hit the real reason but I must confess that as yet I have no more than an idea of what this "unbalanced condition" a package often has is, or just how to correct it.



One of the combs from a hive in which the queen was superseded.

This spring I purchased ten packages—five with queens and five queenless to strengthen weak colonies. They arrived in fine shape and the queens were introduced successfully, but some time afterwards the trouble started. Of the original five queens, only **one** remains (on June 4). Two which were rejected in about ten days to two weeks, seemed poor so perhaps can be dismissed as low quality. The other two, however, were thrown out three or four weeks after introduction—each having five frames with a good quantity of brood in them. Now these colonies were all let-alone; the only examination being a very careful one a week after installation to make sure the queens were in and laying. The hives were then not opened again until the queens were seen on the ground in front of the entrance, as they had been supplied with combs of both honey and pollen. Examination showed queen cells ("emergency" type built over worker cells) barely started, evidently **after** the queens were thrown out. And the queens did not seem to have been balled or stung. In fact, one was still barely alive—stiff with the over-night chill. She warmed up and crawled around quite briskly when I held her in my hand but the bees would not accept her. She was large and looked like she had been laying heavily—her brood chamber showed good work as stated before.

On the other hand, in making forty or fifty nuclei for increase over a period of years, I have had an experience similar to Mr. Hogarth's in the April Confab—rarely has a queen, once introduced, been superseded unless very evidently a failure. And I have always examined these nuclei as I chose, which sometimes was quite often.

Then to come to the queenless packages I mentioned before, out of seven weak colonies strengthened, two over-wintered queens with every appearance of being good were likewise thrown out after about three weeks. These hives were also left strictly alone but these two had been very weak; the added bees outnumbering the over-wintered ones, thus bringing about a condition similar to a package. To further the likeness there was very little brood (due to inability of the few bees to care for it) until after the packages were added. The brood nests left when the queens were thrown out, were both compact and solid-looking, showing that they had been doing as good work as the amount of bees permitted.

The reasons for supersedure? Might it be the use of larvae too old for grafting in rearing the queens, as

suggested in an editorial in May, 1937, Gleanings? Or might it be as one other writer—I cannot recall the name—said, that when the queen had reached the top of her bees' ability to cover her brood and of necessity had to slow up, the bees mistakenly rejected her? The remedy suggested as I remember it, was to add an extra pound of bees to each package about three weeks after installation so the queen could keep right on going.

No, I don't think that disturbance is the main cause of package queen supersedure. This is the second al-

C. M. Isaacson.

most similar experience I have had after following recommended methods for handling the packages. I believe that the "unbalanced condition" is the real reason and I rather like the suggestion of adding a few more bees (or emerging brood) after about three weeks. Of course, my small experience is not exactly conclusive but until I see otherwise, I shall hold the above opinions.

Middle River, Minnesota.

[The idea of adding a pound or two of bees to each package about the end of the third week after a package is installed sounds sensible. This year we added to some packages a comb of brood beginning to emerge with a few adhering young bees, and it is marvelous how the packages have forged ahead. Where there are populous colonies that can stand losing a comb of brood this seems to work out well.—Editor.]

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DRAMATIZING YEAR-ROUND HONEY SALESMANSHIP

C. M. Littlejohn

How can any beeman be a failure in selling honey if he is completely sold on the age-old drama, even from pre-Biblical predilections of the human race which indicate the constant market stability of the bee's products? Unequivocally sold on the significance of honey, which at present is superficial at best as compared to usages and high importance of this historic product in the life of the ancients, the beeman melts sales-resistance like wax as he "goes to town" with his honey.

In every month of the year there is opportunity to emphasize honey sales, from the ushering in of honey displays at autumn fairs, Thanksgiving for the bees' gifts, or Christmas presents of artistic jars of sweetest sweets, to that glamorous season now dawning which is honey itself, drenched with romance if not drama, yet highly dramatic in its sales implications.

This is the advancing July season or honeymoon season when June brides begin the honeymoon, setting up housekeeping and home-making—and what is home without honey? The June-bride touch may well be exemplified in extensive July promotion,—as a market awaits for starting honeymoons with honey,—the best season of the year for honey to get in on the ground-floor of the newlywed's home,—and never leave the table thereafter.

Ushering in of the honeymoon season in July during the month supposed to be filled with honey according to picturesque thoughts of the ancients, is a sales opportunity par excellent for the beemen and retailers of honey,—a time of radiant happiness for those brides recently married, with the wedding trip over, and getting really settled in their honeymoon bungalows.

Then August—the great vacation and picnic month—with its picnickers and jars of honey spread on tablecloths "beneath the bough, ah, wilderness, were paradise enow" . . to apply Omar's famous poetry to modern picnics by shady streamlets, shows the ubiquity of convenient bottles of honey for many picnic spreads.

In fact, there isn't a month on the calendar that does not confirm that honey is a year-round commodity, blending into every meal or season, provided honey is dramatically presented by the enterprising honeyman,—presented in a way that tickles one's imagination as one's palate. But originality plays a big part in the sequence of the seasons and dramatization of this table staple.

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Success has come to those using consistent advertising and sales promotion judiciously, with a fervor that is part of the dramatic showing. Showmanship is particularly seasonal, with showings in window display or even little highway-stands which flag flivvers as they motor past the apiary or near a beekeeper's farm, in keeping with the times. These are most appealing, and extend honey consciousness over a multitude of passers-by or motorists, where there's year-round promotion at the core of the campaign around which dramatic salesmanship revolves.

Seattle, Wash.

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MEASURE HONEY THIS WAY

Mrs. Benjamin Nielsen

Accurate measurements are necesary in any kind of cooking and this is particularly true of honey cookery. Only standard size cups and spoons should be used; cups and spoons can vary amazingly.

Because of its stickiness honey may be difficult to measure and its use may be avoided. Considerable honey may adhere to the measuring cup or spoon and unless this is painstakingly scraped off or out, as the case may be, the amount going into the recipes will not be the amount called for. Guessing at, and adding additional honey to equal that left on the measuring unit does not always work out so well.

If the recipe calls for fat, in any form, measure it first. If no fat is included in the recipe, grease the cup slightly with lard, butter, or any type of cooking oil. The fat forms a thin coating on the inside of the cup and the honey quickly slides out, to the last drop, leaving no trace at all. The white of an egg will serve the same purpose.

If a spoon is used it should be dipped in the fat or egg white so that both inside and outside are coated. A considerable amount of honey can adhere to the bottom of a spoon in measuring.

This time and labor saving shortcut is such a simple, easy precaution to use. And haste or carelessness in measuring may spell the difference between success and failure in honey cookery.

Aurora, Nebr.

A MYSTERY SOLVED

W. D. Ames

Last summer I had a very interesting experience. I was rearing a few queens for my own use, as reserves. I was just completing work on a colony when I suddenly heard a roar back of me. I turned, and behold the colony on which I was rearing queens was swarming out. I immediately checked this by taking the super off and removing a few frames from the brood chamber, and presently all of the bees in the air began to come back to the removed super and open hive-body.

Then I began to look the frames over for the exit queens, and found a young queen presumably just out of her cradle and on the second frame beginning at the left side of the hive. She was fine looking and I removed her (knowing several were yet to come out) and slid the frame back in place. Resting a minute I heard a peculiar sound—something on the order of a whistle although a repetition with no variation in pitch of the sounds emitted.

I looked around carefully and saw nobody or any moving object in sight. I carefully pulled up another frame and was looking at the cells when the same identical sounds were again heard. I looked in every direction but saw nothing. I put that frame back in place and carefully pulled up another when again the sounds were heard. This time I put my ear down to the hive. The sounds uttered were coming from the hive. I did not stop to look at the frame I just pulled up, but put it back and took up the next one to it and heard the sounds as I pulled this frame up. The sound came from this frame. What could it be? I had never heard it before—nothing like it. I put the frame up to my ear. There were some queen cells on this frame (I don't remember how many) but that mysterious sound was coming from one of those cells and I located the one. I could hear the young queen moving around in the cell and she was also making noises, sort of a "peep-peep-peep".

I had never heard a "piping" queen before, but that time I surely had one before me. A sweet utterance of tones without a change of pitch. She had just begun to gnaw the capping off.

Erie, Pa.

SURE-FIRE QUEEN INTRODUCTION

Everett M. Warren

Mr. Herbert J. Link of Indiana has developed a method of queen introduction that can almost be guaranteed to be 100% successful. He has introduced thousands of queens during the past fifteen years with a loss which is not worth mentioning. Last season, as well as in numerous other seasons, Mr. Link introduced about 300 queens without losing one.

In introducing queens the saving of time and labor is an important item in large apiaries, and in the colony itself the saving of one to four days in the time required to release the queen, is also of considerable importance. In some cases queens are lost because the bees fail to release them. A lost queen is lost money and a serious set-back to the colony. The longer a colony is queenless, the more difficult it frequently becomes to introduce another queen.

Drive a small nail through one end of the queen mailing cage, and press it firmly onto the top bar of a frame, with the wire screen side down so the bees of the colony can take care of the queen through the wire. Remove all but one tack from the perforated tin over the hole in the end of the cage and attach a piece of frame wire to a corner of the perforated tin and let it extend over the side of the hive under the hive cover. Close the hive, and toward evening the next day, after the colony has become reorganized and quiet following the search for the old queen, pull the wire enough to draw the perforated tin away from the hole, thus permitting the queen to walk out of the cage and onto the combs. The queen, being released without any disturbance or excitement in the hive, is accepted and goes to work as the head of the colony.

If there is no honey flow on when introducing the queens, release the attendant bees before introducing. The colony should not be disturbed by examining the combs until several days have elapsed.

Several other beekeepers have tried Mr. Link's method of introducing queens, and have been 100% successful. If you lose some of your queens by the method you now use, try the Link method and save queens and time.

Medina, Ohio.

BEE MARTIN CAUGHT WITH THE GOODS

B. P. Sieber

On page 383 of June, 1938, Gleanings, J. V. Wierer of Orlando, Fla. under headline "Do Martins Destroy Bees", wonders if his neighbors' martins catch his bees.

A neighbor of mine has some poles with gourds hung upon them to which the black martins come each spring, making their nests and homes in them through the spring and summer. These are near my small bee yard and do not seem to trouble the bees. However, there is a wood's bird here which some people call a bee-martin, about the size of the common blue bird, the male being red and the female a greyish and light redish tinge. They like to perch on limbs or fences near the hives and dart down and catch bees coming in from the field with loads of nectar.

When the tulip poplar is in bloom they seem to be attracted to the trees by the hum of the bees. I have shot some of them and always found five or six bee skeletons in their gizzards, the softer parts of the bees having been digested; also there were some bees in the passageway between the craw and gizzard in the process of digestion. I said craw but I really do not know if they have a craw like other birds. I found in them a tube-like passageway containing the latest catch, and in the gizzard I found bees that had been digested all but the hard parts of the skeletons.

One of these birds which I shot fell dead within six or eight feet of the entrance of one hive, and although there was a mesh fence between the bird and the hive, almost instantly there were about a half dozen bees around the dead bird. One worked itself down between the feathers and inserted its sting. They seemed to know it was their enemy doubtless recognizing it by its odor. Had any other bird or object dropped down at that point I do not think they would have taken any notice of it. The common black martins which make their homes in my neighbor's gourds have not bothered my bees.

Belle Ellen, Ala.

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A BEEKEEPER FOR 70 YEARS

On July 20, the Chautauqua County Bee Association of New York State will honor its oldest beekeeper,

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Mr. L. D. Gale, a charter member who will be 84 years on that day. Mr. Gale was the first president of the Association and continued as such for five consecutive years. He is now its vice-president.

Mr. Gale has had 70 years of beekeeping experience. Starting with two colonies he kept on increasing his number of colonies, producing 15,000 pounds of honey in one year. Today at 84 years of age he has what he calls a small apiary which he takes care of himself. This, he says, is his pastime for his principal business is agriculture. He operates a five-hundred acre farm. Mr. Gale was at one time a correspondent of the Rural New Yorker, and employed on the State Institute force as a lecturer. He also has been a continuous subscriber of the Gleanings for about 60 years.

This association of which Dr. M. J. Beal is president and Mr. O. E. Linquist secretary is making elaborate plans for a big day on July 20, to celebrate Mr. Gale's birthday at his home. Eminent speakers of national note will be present.

The families of the beekeepers will be welcome. Bring picnic baskets of goodies. Coffee, sugar, cream and ice cream will be furnished by the Chautauqua County Bee Association.—Dr. M. J. Beal, Pres.

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ASSISTING THE BEE INSPECTOR

T. O'B. Clouse

One of the things I most enjoy is an inspection trip with Jerry Loewendick, the Licking County Bee Inspector. Like most inspectors he is an expert beekeeper of many years' experience.

Jerry is glad to have a helper and soon shows one the "tricks of the trade." It works out somewhat like the following:

Often Jerry telephones the beekeepers beforehand, but he always stops at the house. Then the hives are inspected with a small puff of smoke in the entrance and a little smoke under the inner cover before it is removed. Then smoke may be blown across the frames if signs indicate that they are "ready." Next we remove and inspect the combs—all with slow smooth motions so as not to alarm the bees. When some bees begin to walk around with their stings pointing up it is time to give a little more smoke. As smoke disorganizes the bees I always use as little as possible so as not to interrupt their work.

We wish to find the queen in this hive so we use no smoke under the inner cover and very little at the entrance. Now the inner cover is carefully removed. "See that group of young bees on the top-bars?" Jerry says. "You will probably find the queen on a frame there." And I generally did! That was three seasons ago and I'm still learning to do it. Think of the time saved when the queen must be found in a strong colony!

Afterwards Mr. Loewendick discusses the condition of the bees with the beekeeper. Jerry answers questions, and inquires if there are any new apiaries. Later, as we drive along, we discuss the various ways of keeping bees and problems pertaining to beekeeping.

This is a real chance for the beginner to get started right. Call your inspector and try it. It's fun and you will see the apiaries for miles around.

Nashport, Ohio.

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COMMENTS ON CURRENT ITEMS

J. F. Dunn

Mr. Laing of Toronto has a good article on the production of comb honey in June Gleanings. He is a veteran producer of comb honey and a very successful beekeeper. A frequent exhibitor of high grade comb honey, in fact, I judged his exhibit at the C. N. Exhibition over 30 years ago. One cannot make any mistake in following his advice.

While producing comb honey exclusively in my early days I followed much the same plan as Mr. Laing. With a fine clover range and a large wooded section in which basswood and tulip trees abounded we did not have any trouble getting bees to enter supers without adding bait combs.

Bait Sections

When they put a sawmill in this large bush (almost a forest) we tried the bait section plan. It worked rather well but those "baits" when finished by the bees could not be placed in the same grade as the rest of our crop. We found that a bait section when filled was pretty sure to be a cull section. Now and then we noticed populous colonies that refused to enter a super of sections. We worked out a system of forcing them

to "go aloft" but they were too slow in doing so and we removed the sections and put on extracting combs. Presto! up they went. We bought an extractor and made more money working for both comb and extracted honey, and have followed that plan ever since.

The Double Brood Chamber

I note the editor's footnote to E. S. Miller's article on the Demaree system, and would like to give our experience with the double brood chamber plan.

In the spring of 1935, after taking a survey of the possibilities, we found that what has been one of the very finest clover localities in this Niagara peninsula was completely ruined as far as alsike and alfalfa were concerned. The past two hard winters had heaved the clovers to such an extent that there was no hope of a crop that year. We have for years given our queens the run of two sets of brood combs. We did not leave any queen excluders on top of this second story and decided we would tier up the extracting supers—plenty of them—and give the queens the whole range of the top stories and visit the yard after the usual time near the close of the white honey flow. To our surprise nearly all the colonies were boiling over with bees. Our double-walled cork-packed hives are so well insulated against the heat of summer (as well as the cold of winter) that hanging out when plenty of super room is provided is almost unknown. Mr. Kenny who put the supers on for me, said "there has been very little or no swarming here." Looking in the hives we were very much surprised to find that the combs were filled to the top with nice light colored honey with no space to store more. The mystery was, where did they get it? We had to find out, of course, and discovered a big field of sweet clover in bloom at a distance we used to consider beyond the limit of profitable flight.

In regard to the double brood chamber to which the queen had access, the surprising fact is there was no brood above the second story above the lower brood chamber.

Alsike Has Returned

After two complete failures from alsike in 1935 and 1936, this year the good old alsike is a sight to see. Fields in which alsike has not been in evidence for a number of years and on land where it has not been sowed for a number of years have a grand stand.

Golden Bees

Mr. O. B. Griffith quotes the old adage in criticism of the goldens, "Handsome is as handsome does", and we agree with him. We know something about the goldens. There was a great demand for them several years ago. Who wants them now? They remind me of the girl that was a peach in the dance hall and a lemon in the kitchen. And those wonderfully prolific queens. Have you never noticed some colonies boiling over with bees that were the last to leave their hives mornings and first to quit work at night? This condition was present as long as the same queens headed the colonies. Other colonies were at work at break of day and bringing in nectar late in the evenings.

Ridgeway, Ont.

J. A. Munro of Fargo, North Dakota, is the state bee inspector, and a teacher in the University at Fargo. Mr. Munro was born in Ontario, took post graduate work under Dr. Phillips at Cornell, and has been doing splendid work in North Dakota for the past eleven years. The first picture shows him in front of the Agricultural Building on the campus. The next is a picture of his home, and the other picture shows him holding a comb taken from an experimental colony.

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Heads of Grain from Different Fields

Efficient Manipulation of Colonies

I read somewhere in a bee journal that in commercial production, 20 minutes per hive is adequate for manipulation. It would seem to me that a man who could not work faster than that would be rather inefficient. Just an ordinary operator should be able to handle at least ten colonies an hour under average conditions, inspecting brood and, when necessary, finding queens. I am assuming that frames with long top-bars are not used and that frames and hives are reasonably free from propolis. In the spring with good weather conditions and before colonies become populous, finding and clipping 20 queens an hour is not impossible.—E. S. Miller, Valparaiso, Ind.

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Honey As a Remedy

A reverend gentleman suffered from a severe attack of bronchial trouble, the bronchial tube being clogged with phlegm. From December, 1936, to August, 1937, he applied medical treatments with no avail. Finally he resolved to try honey. I handed him a quart jar of honey which he used in small doses several times a day. After he had used all of it he asked for more honey and remarked that "The jar of honey you gave me had a wonderful effect, I feel now like a new man."—Bro. Alphonse, O. S. B., St. Meinrad, Ind.

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Honey Cherry Relish

Two quarts red cherries (measure after pitting), 2 cups white sugar, ½ cup light brown sugar (firmly packed) 1 cup honey, 2 cups white vinegar, 10 sticks cinnamon, 2 dozen whole cloves, 2 cups chopped nutmeats, (walnuts or pecans are preferable), and 2 cups white raisins. Wash and pit cherries, then measure. Combine honey, sugars and vinegar and bring mixture to a boil. Tie spices in a muslin bag or one made of several thicknesses of cheesecloth. Add spice bag and cook for 10 minutes. Add the cherries and cook slowly for about 50 minutes. Remove spice bag and add the raisins and nutmeats. Cook 5 minutes more. Pour into freshly sterilized jars and seal.—Mrs. Benj. Nielsen, Aurora, Nebr.

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Branding Bee Equipment

Supplementing John Conner's article on the "Identification of Bee Equipment" on page 224 in April

Fig. 1.—Hive in apiary of John Connor, showing New Jersey brand mark.

Gleanings, Fig. 1 shows a New Jersey hive which has been branded. This hive which is painted with aluminum paint rests on a piece of corrugated sheet iron. This is an efficient way of keeping down grass

Fig. 2.—The New Jersey warning sign and branding iron.

or weeds at the entrance and is especially suitable for out-apiaries. Fig. 2 is the warning sign with a branding iron head in the foreground. It is hoped both will result in fewer losses.—C. L. Howk, East Orange, N. J.

American Honey Institute Notes

Are You Going to the Fair?

Although it is only the first of July, it is not too early to begin plans for honey exhibits at Fairs. American Honey Institute extends to all exhibitors an invitation to take advantage of the service it is able to give in connection with planning honey booths and providing literature for distribution.

State and County Fairs are such excellent places for contacting the public that honey producers should, if possible, arrange exhibits at these places. Beekeepers' associations could profitably adopt fair exhibiting as a part of their programs. This type of advertising is probably as cheap as any when it is considered that there is opportunity to contact hundreds and thousands in a personal way. However, this is easier said than done unless the exhibit is set up and maintained to appeal to the visitors. For ideas, study displays in stores and store windows and arrange the booth with this purpose in mind—to SELL HONEY, whether or not it is actually sold at the booth. Put SALES APPEAL into the booth as well as honey.

The booth need not be elaborately decorated; in fact, it is much better to make the decorations just as simple as possible, yet artistic. They should form the background for the honey and not be so emphasized that the visitor sees decorations and no honey. A large number of pails, jars, and combs is not necessary for a successful display, although massive displays, if set up properly, are very impressive. A small display, well arranged, will have more sales appeal than the other type poorly done. A well-lighted exhibit is very important—make it easy for people to see what is in the booth. Honey shows up very well under good light. Then, over and above all, be sure that **everything** about the booth is **CLEAN.** Put yourself in the visitor's place and look at the booth and yourself with a very critical eye.

Fair visitors are very curious about bees, honey production, nutritional value of honey and about its uses. The person in charge of the booth should be able to answer questions correctly or to refer the inquisitor to a reliable source for information. Questions should never be answered with "hearsay" information, especially those pertaining to honey as a food. The information should always be authoritative. Last but not least, try to have available for interested people, printed material which gives facts about honey and its uses.

Another worthwhile undertaking is a booth where honey cookery can be demonstrated. Such a booth should be in charge of someone who KNOWS honey and how to use it. Include a display of honey-made products but take care that they are of good quality and of high standards. There are standards for judging cookery just as there are standards for judging architecture and cattle. A "fallen" cake or a loaf of bread insufficiently risen or not well baked should never be put on display. The foods should be protected by cellophane or glass. Recipes for foods demonstrated and for those on display should be available. Visitors become interested and want to make the things they have seen made or that are on display. If their request cannot be filled, then maximum results are not obtained from the booth and potential honey users are lost.

American Honey Institute, Madison, Wisconsin has available a demonstrator's outline free of charge. There also is available suitable literature for distribution. Write for samples and prices and be sure to ask about the SPECIAL FREE OFFER on the leaflet, "It's a Honey," which contains a dozen all-honey recipes and is excellent for use at fairs.

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Read American Honey Institute's ad on page 470 of this journal!

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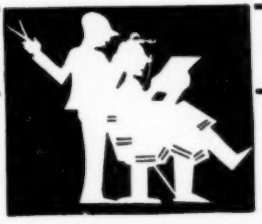
Watch the mail for your copy of Institute Inklings which will be out soon and which will bring details on the Honey Recipe Contest and Honey Harvest Week that you will not want to miss.

Just News



The Iowa Beekeepers' Association will join with the State Horticultural Society in a field meeting at Pellett Gardens, near Atlantic, on Thursday, July 14. The horticulturists will have the morning program, starting at 9:30 with visits to the asparagus, tomato and berry fields in company with members of the staff of the horticultural department of Iowa State College. The afternoon program will be devoted to consideration of cooperative experimental work carried on jointly by the Iowa State Agricultural Experiment Station and the American Bee Journal. The story of the effort to find bees resistant to American foulbrood will be told by Dr. O. W. Park, and Dr. J. N. Martin will discuss the effort to find a red clover with corolla tube short enough to permit the honeybee to reach the nectar. Those in attendance should bring a basket lunch as it is several miles to the nearest restaurant. The association plans to serve coffee.

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Plans are shaping up nicely for the joint summer meeting of the Minnesota and North Dakota Beekeepers' Associations to be held at Grand Forks, North Dakota, July 28 and 29. This should be a most valuable meeting for anyone interested in beekeeping of this region. So plan to spend a couple of days re-newing your friendships with fellow beekeepers and improving your store of knowledge on the subject of beekeeping. Speakers already secured include Professor L. T. Floyd, Provincial Apiarist of Manitoba and Dean H. L. Walster of the North Dakota Agricultural College. The two-day session will include a program of talks and discussions on beekeeping, tour of commercial beeyards of this section of the Red River Valley and a picnic luncheon. The Grand Forks Chamber of Commerce will provide the coffee, cream and sugar.—J. A. Munro, Sec.-Treas.

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Charleston, South Carolina, within the past decade has become one of the principal Southern resort cities. Beekeepers of the Southern Beekeeping States' Federation will have an opportunity to view this historic city at the annual meeting to be held there November 28, 29, and 30. In matters of interesting places and buildings, Charleston has no peer in all of Dixie. One could spend season upon season in the intriguing atmosphere of romance and history, delving into the archives of the Charleston museum (the oldest in America), the library and the public buildings of the city, and inspect the many spots where much of America's early history was made. The priceless treasures of old Charleston, such as churches, old homes, historic buildings, forts and other landmarks, always attractive to the tourist, have been carefully preserved as a proud part of the Charleston which interests and charms old and young, visitor and native. Don't miss the Southern Beekeeping States' Federation meeting. It will be jammed full of inspirational instruction, historic scenery, and oodles of fun.—Ned Prevost, Chairman, Program Committee.

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A meeting of the New Jersey Beekeepers' Association will be held at the apiary of H. P. Holloway, West Creek, Burlington County, N. J., on Wednesday, July 13, 1938, beginning at ten o'clock. Bring lunch and all the family. An opportunity for salt water bath is promised.—E. G. Carr, Sec.-Treas.

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The regular summer meeting of the Virgina State Beekeepers' Association, will be held on Wednesday, July 20, at Miller Park, Lynchburg, Virginia. This as usual will be a basket picnic and watermelon feast. A good place to swim will be availible for those who wish to cool off.—H. W. Weatherford, Sec., Va. State Beekeepers' Association.

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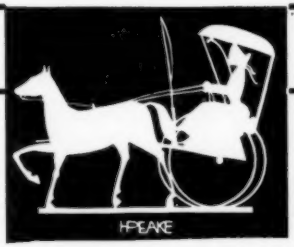
The Lehigh - Northampton Beekeepers' Associations invite beekeepers of New Jersey, and from Carbon, Monroe, Luzerne, and Schuylkill Counties, Pennsylvania, to a bee meeting Saturday, July 9, to enjoy the following program: William

(Continued on page 465)

Spinster



Jane Says:

Here it is June 11, and no clover in bloom yet. The weather has been almost too cool for comfort, and there has been almost too much rain to suit the farmers — the hardest people on earth for the weather to suit. Some of the grain on low flats has turned yellow, but all agree in expecting plenty of hay. Remembering the old saw, "A rainy June sets all a-tune," we are quite optimistic as to the crop outlook.

As to the June flowers, with the honeybee in mind, pollen may be obtained from the wild roses, from buttercups, strawberry blooms, and some late-blooming chokecherries. Dandelions may bloom occasionally yet, but the main blooming is over. Our yard was literally carpeted with gold, while they lasted, and was more beautiful at that stage, than the closely-cropped, velvety, green lawns so much desired. So long as there are bees, dandelions may run riot here, and to see the small children gathering them, gripping the heads in tight, warm fists, we know their beauty attracts even the tiny tots.

Salt for Bees

Bees must like salt. I've noticed them getting something from the out-of-the-way spot where we empty the salt water from our ice-cream freezer. It cannot be the water alone. They can get it from better places. It must be the salt. And why not? We all require it—animals, humans, even fowl, but in much smaller quantities. A neighbor of ours lost a large number of chickens which got salt from where a freezer was emptied.

Do bees sow wild oats as our young folk sometimes do? Or are they always above reproach? Some are lazy, we know. They get discouraged, and give up trying, because they need a "queen-bee" to direct their activities, to give them a push, with the admonition, "Get busy. Work, or we will starve." Some peo ple, too, are like that. They can work like the dickens when working for someone who directs their labors, but left to work alone, they are practically useless. Drones being helpless, poor things, aren't supposed to even try. It is enough for them to stalk pompously about, adding an air of dignity and prosperity to the colony atmosphere. Supporting males who do no work, speaks well for the food supply, but when winter comes, out they go.

Why Are Bees Somtimes Found in Questionable Places

Bees are sometimes found in questionable places, just as people are. They are not doing missionary or social reform work, either. Are they gathering material for slum-gum? What, too, do they get from sawdust piles, as they are not paper-makers? Females though they are, they surely are found where they are not supposed to be.

Unless bees gathered nectar from dandelion blooms, there must be short rations in the hive until raspberries and clover bloom. At present there is little nectar. Though wild roses are sweet smelling, we doubt that they yield any nectar. Trifty housewives that they are, they must have filled their storeroom, the brood-chamber, while nectar was to be had. What male would show such forethought? Yet, I'll admit mere men are sometimes wonderful providers, and women the spendthrifts. This does not betoken a change of heart, but rather proves that the exception is not the general rule.

Clover Never Looked Better

Judging by the rank growth of clover everywhere, due to so much rain, this should be a great year for honey. Farmers and beekeepers should sow more of it. It opens up and sweetens the soil, as all legumes do, chokes out weeds, fills the air with fragrance, and gives us our honey. Luckily for us, we had that fine field of sweet clover, a couple of years ago, because now, all over the yard, over the hills, along the roadsides, it grows luxuriously. Just to see how it has spread would make many old-timers, who considered it a very bad weed, almost turn in their graves. To us, of modern times, it is a welcome sight. May it spread, and grow abundantly, say I.—Spinster Jane.

XUM

A Confab

By the Editors

The discussion on early or abnormal supersedure of queens sent in mailing cages and packages is so vital to our industry that we are continuing it in this issue. We hope to reach some conclusions which we shall try to summarize in the next issue. It is possible we may find it necessary to extend this discussion—this depending on the contributions that are received in the near future.

There are other topics that need to be discussed. Two of these have been raised in recent issues, viz. goldens vs. leather-colored Italians, and dark honey vs. white honey. Also the question of bottom, middle, and top entrances for wintering should have further discussion.

And now we introduce Hazel V. Bonkemeyer of Randleman, N. C.

Hazel V. Bonkemeyer Tells Mr. Freeland

A Confab is becoming the most interesting part of Gleanings but I cannot read it without talking out loud sometimes. I cannot enter the discussions for I am uneducated, but have been rearing queens 20 years and have been a beekeeper 24 years. I know the ones who are doing the writing to be high-powered fellows, and realize they may thump me off the globe, but in the face of all I will risk a few words. It would take several pages to say all I would like to but will cut it short.

A few years ago Mr. Jay Smith quit the small mating nuclei. You remember how hard he went at it—knocking them in favor of big ones. I said then if Mr. Smith was as smart a man as I thought him to be he would come back and he did come back, and just as strongly for the small mating nuclei as he had been against them and that ended all the uproar he had got going about the subject. I say the same about Mr. Freeland and his views on queen rearing. He will eventually turn back and it will all pass over. I believe he is convinced now that he is climbing the wrong tree, but hates to come down while so many are looking. I would like to tell Mr. Freeland that just as good queens can be reared by grafting as by any other method if everything is done right under right conditions. As Mr. J. D. vander Merwe says, the larva can be transferred without even being touched with the needle and with absolutely no injury from the needle.

I think the greatest and most common injury that happens during grafting is from drying and chilling due to the air in the grafting room being too dry and too cold. To sum up, the injury that is most commonly allowed with the grafting method is from exposure between breeder-hive and cell-builder. Condition of colonies that have a part in the job and the weather are the same with all methods. It is possible for man to control most all but the weather, but the most careful queen breeder who must rear large numbers of queens from early until late to fill his orders is lucky if he has a few batches of queens during the season that had all conditions that have to do with producing 100% good queens, just as he knows they should be all the way through, leaving out the weather over which he has no control.

I think "unbalanced conditions may cause supersedure" as Mr. J. W. Bogart says, just about hits the supersedure problem on the head and I agree with many things he offers.

I would like to see Mr. Byron C. Jones, Mr. J. D. van der Merwe, Mr. Pritchard and others keep Mr. Freeland busy until he sees fit to turn his talent in something other than putting the grafting method of queen rearing, which Mr. Doolittle and others found and developed for us, in the creek.

Hazel V. Bonkemeyer,
Randleman, No. Car.

It appears that the majority of those who report abnormal supersedure mention it in connection with queens in packages, rather than with queens sent in mailing cages. Is it possible that the packages of bees with which the queens are shipped and put into hives have some detrimental effect on the queens? In other words, do packages of bees create an abnormal environment for queens? The matter was alluded to in an editorial on page 96 of February 1938 Gleanings, entitled "Unbalanced Conditions May Cause Supersedure."

In the following letter from Emil Kellstrand of Rockland, Mass., this point is touched on:

It is true that for some reason the queens in package bees are, in most

cases, superseded the first season; but it is not true with respect to queens shipped by mail and introduced to regular colonies or nuclei. In fact, some of my observations also seem to indicate that queens shipped in packages, taken out at arrival and introduced to nuclei or colonies with brood, will not be superseded any oftener than ordinary.

One year I had three packages come from the South and all of them superseded their queens soon after arrival. That very same week a friend had a number of packages from the same breeder. He did not have hives ready for all of them, so he united some and gave me three extra queens taken from those packages which I promptly put into four-frame divisions. These queens turned out to be good. Two of them I replaced in the fall of the second year, the third one I liked so well that I did not have the heart to take her life, and she was superseded the third year. This may be a coincidence but very likely it has some special significance.

Does Not Think Nature's Way Best

The notion so many people have, that Nature's way is always the best, and, for that reason grafted queens are not so good as those raised by the bees themselves, I do not think much of.

It is well to remember that man has become civilized only in proportion to his ability to improve on Nature. It is, therefore, logical to suppose that queen-bees raised by the best scientific methods of today are an improvement on Nature, and, for that reason I feel sure that such queens, everything else being equal, will last longer than those raised by the bees' own slipshod methods. When I say this, it is more than theory for it is based on over thirty years of experience with bees.

For a number of years I have raised some queens for my own use by grafting and other methods, and have learned that when I do it right, or the way it should be done, such queens are superior to queens produced by the bees or Nature's method, in every respect.

Unfortunately we are receiving a great number of poor queens from breeders who at times have a little hard luck, so conditions for raising the best are not just right.

Going Away From Nature Essential

I further think that methods of queen rearing can still be improved, not by going back to Nature but, by going away from Nature. By this time it should not be very difficult to construct an electrical incubator that will do a better job caring for queen cells after they are sealed than thirty thousand bees. Early failure of queens we also know is attributed to poor drones or unfavorable mating conditions, another example of Nature's blundering. Artificial mating, now in its infancy, we have good reason to believe, will in time be perfected so it will prove itself to be another improvement on nature.

Speaking of drones, we are not in the habit of paying much attention to them, and right here is a great field for improving on Nature. Instead of depending on the bees building drone comb as they please we might make drone comb foundation with a little larger cell base to get larger drones better fit for mating by both natural and artificial means.

There is, generally speaking, no limit to how far man can go in this field of improving on nature by artificial methods.

Emil Kellstrand,
Rockland, Massachusetts.

Continuous Feeding of Packages Essential

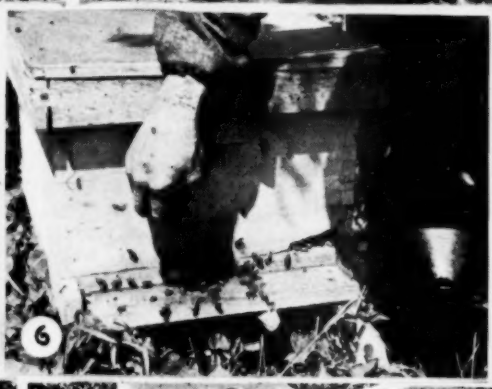
We now hear from A. W. Rigler of Courtenay, B. C., who gives his experience with packages. He brings out a point which we believe is important, viz., that continuous feeding of sugar syrup seems essential for normal development of packages. Unless ample food is supplied during the spring months brood rearing is retarded and abnormal supersedure may result. Mr. Rigler's letter follows:

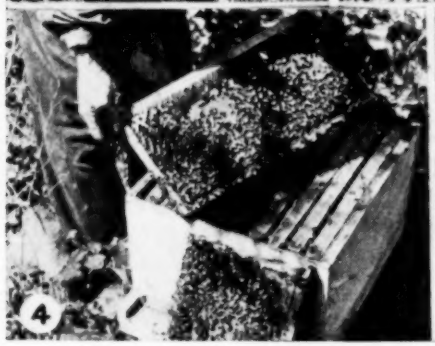
I shipped in ten 2-lb. packages and two 3's last spring, (as they were only two days on the way, they had lots of syrup left). I hived them about 7 P. M. on empty combs, punched a hole in the cloth and shook out all the syrup into the comb, and placed them outside of the cluster, pulled the wire off of the queen cage and quickly put her down over the frames. The weather was good with honey coming in fair, and an abundance of pollen.

These queens were all laying well, so were clipped about 10 days after receipt. One only began laying a few drone eggs and queen cells were formed. I fed syrup nightly to all, and this seemed to check it. They were moved to fireweed in due time and all but the one mentioned gave as good as the best wintered-over stock. This one hive requeened in July. I noticed that brood was keeping pace with nectar, and all packages were increasing faster than 60 wintered-over in same yard. That is why I fed so steadily. Did I stumble in the right way to forestall supersedure?

(Continued on page 468)

A DAY WITH TH H





THE OHIO INSPECTOR

1, The inspector opens the hive and prepares to examine brood in the presence of the beekeeper; 2, The inspector examines the brood; 3, The brood is clean; 4, Replaces the frame; 5, Ah! it looks suspicious. Apparently AFB; 6, Marks hive; 7, Inserts cyanogas in the hive to kill the bees; 8, Digs hole in preparation for burning; 9, Piles on diseased material; 10, Prepares to set it on fire; 11, Fire burning; 12, Additional material put on fire; 13, Finishes up the job; 14, Waiting for the fire to burn; 15, Drops paper into hive to scorch out same; 16 Hives are scorching; 17, Covers up the hive with hive cover; 18, Removes cover to see that the job is completed.—Photos furnished by Chas. A. Reese, Ohio State Apiarist.

XUM

Editorials

Moisture Brings Back White Dutch and Alsike Clovers

It has been some time since white and alsike clovers have been so plentiful as they are this year. The pastures and meadows are a pinkish-white sheet of bloom. The air is laden with a pleasing aroma of nectar.

This sudden appearance of so much clover bloom is of course due to the return of abundant rainfall following the drouth years. Clover seeds which have lain dormant in the soil during the dry seasons have germinated because of the proper environment. The plants are vigorous and bloom is unusually abundant.

If favorable weather for nectar secretion prevails during the blooming period the bees will take advantage of their opportunity. The pity is that so much of the bloom is not visited because of the lack of bees.

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Variety of Conditions Just Prior to the Clover Flow

This year the conditions that prevailed throughout the clover belt just prior to the main flow were somewhat baffling. Some yards were on the verge of starvation during cool rainy weather. Other yards a dozen miles away had an abundance of honey and colonies were swarming whenever the bees were able to fly.

The apiaries that were short on stores soon built up to normal strength and now are storing surplus and what is more, they are not swarming, presumably because brood rearing was retarded somewhat, due to a shortage of honey.

Some yards with an abundance of stores did not receive supers early enough and consequently swarming resulted. These yards may not secure as much honey as the yards that were short on stores and in which no swarming occurred. This is not arguing for scanty stores but rather for proper management of colonies with an abundance of stores early in the season.

We are still at a loss to understand the difference in the quantity of stores found in various yards, when to all appearances these yards had approximately the same amount of honey last fall. Perhaps beekeepers in other localities have had similar experiences and can throw some light on this problem.

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Central Honey Extracting Plants

Some years ago when out-apiaries began to be established it was customary to maintain at each yard a honey-house in which supers were stored and extracting was done.

At present the trend appears to be along the line of centralizing extracting plants. Since it is necessary to travel to and from out-apiaries to give them the attention they need during the season, it is now customary to take along to each out yard a capacity load of supers on a large speedy truck. As a rule, the honey produced at out yards must eventually be hauled to the central or home plant to be processed ready for market. It would seem to be more economical to haul the supers of honey to a central plant for extraction, especially since a large truck could carry a capacity load of supers on the homeward trip, during the extracting season.

Out-apiary work must be carefully planned in advance in order to economize on time, labor and truck mileage. Plan your work, then work your plan.

• • •

The Attitude of the Medical Profession Toward Honey

The average medical man of the United States regards any mention of honey as a food and medicine as a huge joke, in spite of the contrary opinion held in Europe. Fortunately there are not a few who prescribe honey for their patients. Dr. Bodog F. Beck's book, "Honey and Health" referred to on pages 374 and 386 of our last issue will do much to enlighten the medical profession of this country. If beekeepers will buy a copy and then request their local physician to read it, it will do much to pave the way toward getting the doctors to recognize honey, as they now recognize and prescribe glucose and dextrose, for babies and people with impaired digestion.

When we once get the medical profession to recognize honey as it now recognizes these other two forms of sweets, there will be no difficulty in selling honey. People will buy it and use it as a sweet that is safer than the ordinary forms of manufactured sugar. Eminent doctors and dietitians condemn the eating of candy when it becomes a habit.

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A Scientific Bee Journal A subscriber recently wrote us asking whether we could publish a strictly scientific bee journal that would record in scientific terms the findings of research workers all over the world, on questions relating to scientific bee behavior, bee management, and honey as a food and medicine. He would publish in full the papers of scientific men of the United States and Europe.

We reminded our correspondent that we already had such a publication in English, entitled, "The Bee World", edited by Annie D. Betts for the Apis Club, The Way's End, Foxton, Royston, Herts, England. Miss Betts reads some eight different languages and is able to pick out two more with the help of a dictionary. Scientific contributions, gathered from over the entire world, are given in brief in The Bee World and in such terms as the average English reader can understand.

Even if we published some of these scientific articles in full, it is doubtful if they would be read, much less understood. Miss Betts, therefore, is doing an invaluable service to the English speaking people of the world. Not only does she cover the science of beekeeping, but also of the practical side in a brief form so that any one can understand. Very little escapes her discriminating eye, and yet this journal is sold to the English beekeepers for $2.60, postage paid, including membership in the Apis Club.

Some of Miss Betts' best work will appear in the next edition of A B C and X Y Z of Bee Culture that will be available to the public along about September, 1939.

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Plain English— Why Not? One of our subscribers complains, not because of the science that we are giving to the public, but because some of that science is given in terms not understood by the average person. He believes that technical terms should, as far as possible, be reduced to plain English, and we quite agree with him. For example, he points to this: "Anterior portion of each of the first five abdominal tergites." He wants to know why we couldn't have said "The front portion of each of the first five body segments". The word "tergites", means the horny rings composing the lower part of the bee's body, which telescope back and forth inside each other to increase the size of its body to take on more honey.

Scientific men are supposed to talk to scientific men who understand all these technical terms, and of course they are more exact.

A scientific bulletin must, necessarily, use scientific terms, but in some cases the equivalent could be put right after the word in plain English. For example, the scientific man would say "tibia" meaning a portion of the bee's leg. It would be perfectly correct to say "thigh"; in the same way "tongue" for "glossa". We must remember that there are scientific terms for which there are no common word equivalent.

Gleanings recognizes the validity of these criticisms and will try hereafter so far as possible to put in parenthesis words which will be understood.

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Yellow Sweet Clover Again As was the case last year, yellow sweet clover is much in evidence. Three or four years back, the yellow variety was seldom seen, but now it is just as common as the white. Unfortunately, it comes into its best bloom during the best of white clover. If it came a little before or a little after, it would be better; but it is very welcome, just the same. Later on, follows the white variety.

The question was asked last year "Why is there now so much yellow sweet clover?" It is because seedsmen get the two varieties mixed, and the yellow is often sold along with the white, with the result that the two varieties bloom at separate periods. Again, yellow sweet clover makes a better hay crop, and, what is more, will resist disease better than the white, says Prof. Willard. The yellow is now so thoroughly scattered over the clover belt of the United States, that it has become an important source of honey. It does not yield quite as much honey as the white, however.

XUM

The seed of yellow sweet clover can be detected under a hand lens by purple flecks found on most of the seed of this variety, says Dr. J. B. Park, Professor of Agronomy at Ohio State University, Columbus, Ohio.

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Prospects Fine—Don't Lose Your Head Throughout the clover belt, comprising most of the Northern States, weather conditions have been ideal for the growth of clover. There has been plenty of rain, and white, alsike and red clovers have appeared as they have not shown up in years. Already, half to two-thirds of a crop has been secured in many localities at this writing, and it appears that the flow from yellow and white sweet clovers followed by alfalfa will last somewhat longer, possibly for another whole month—no one knows. In the meantime, beekeepers may lose their heads and feel that they must sell to the first buyer who comes along, no matter what price is offered, or who the buyer is.

The demand for good, old-fashioned white clover and alsike clover honey should be strong. A pure white clover honey is something that has not been on the market for several years past. We shall have it now.

Remember this: There is and has been an active demand for comb honey not supplied. It is now bringing good prices. Don't congest the market with too much extracted. The conditions are just right for producing comb honey this year. Swarming can be controlled. See page 353 June.

Doubtless buyers will tell you that the bottom has dropped out of the market and that you should sell at once at a price they will offer. In the first place, make sure that the offer comes from a responsible buyer who has a bank rating. If he cannot furnish such rating or good references, require cash payment or a C.O.D. shipment. Don't be in too big a hurry to sell.

Here again, don't accept any post-dated checks. Some irresponsible buyers, with no cash in hand to buy honey, will offer a post-dated check, sometimes in good faith, in the hope that when they sell the honey they will be able to meet the check. Post-dated checks are always dangerous, and if it can be proved that there was intention to defraud, when such a check was given, the maker can be arrested. However, it is not always possible to prove this.

Selling Around Home

This year especially, beekeepers everywhere should put up good, clean honey in small packages and sell it around home. It would be a great mistake to dump carloads of honey on the open market all at one time. Tell your customers that you have **new white clover** honey and sell, if possible, at the regular standard prices that have prevailed; not less than 75 cents for five pounds, in tins.

If there was ever a time when we needed the American Honey Institute, and the good work that Dr. Bodog F. Beck is doing, it is right now. In closing, let us repeat: don't be in a hurry to unload your crop; avoid the oily, well-dressed buyer who parades his financial standing. Go to your bank and get all the information you can. In addition make him furnish references.

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The Double Brood Chamber Scores Again "Jack", the junior editor, is out at the outyards putting props against his tall skyscrapers to keep them from toppling over. Score one in favor of double brood chamber brood nests. Single brood chambers don't need props.

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A Happy Predicament Speaking of skyscrapers, Mr. L. S. Griggs, a carload producer at Flint, Michigan, was asked the question "How do you get your honey down off those ten and twelve story colonies?"

Like a flash his laconic reply was, "If the bees put it there I'll find a way to get it down."

We hope there are others this year who will be in the same happy predicament.

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The Cover Picture The attention of the reader is directed to the fine cover picture of a twice life-size of a bee on a white clover blossom by H. H. Root of the Gleanings staff. Huber, as he is called in the office, is the General Manager of the Root Co., but his hobby is the taking of fine movies and still pictures.

Chas. Reese, State Bee Inspector of Ohio, is another still picture fan. See his work on pages 440 and 441 which tells how to treat AFB.

From North, East, West and South

NORTHERN CALIFORNIA, June 1.

Weather: We had no rain in May. This is not "unusual." It would have been "unusual" to have had rain in May. So that is that.

For the past four months we have written of the honey prospects only to change and write a different report each succeeding month. Paraphrasing a popular saying of "E. R.", "Why write so much when so much we write is not true?" We never had a finer prospect for a eucalyptus crop than we had here in the Bay district at the beginning of the season—say October and November. The blooming commenced several weeks early; bees built up and were ready for the real flow which the loaded trees offered in January. Then our heavy rains commenced and continued until we thought there was little hope for anything but a surplus of bees. During this time neglected bees were falling behind. In April when we thought all hope for a honey flow was gone a new lot of buds commenced to show and were soon bursting like popcorn on perhaps a third of the trees. Then swarming commenced. Some beekeepers who did not keep up with their bees told us they would not get a pound of honey and they had grave doubts if they could save their bees. Strange as it may seem the flowers kept showing up and now we can sum up our situation as follows: The up-to-date beekeeper can boast of 100 pounds per colony, the great majority 50 pounds, and it is a mighty poor beekeeper who tells us his bees swarmed themselves to death and he has no crop.

Market: The market is poor. One of our big dealers answered our inquiry as to prospects with, "There is no market." When he told us the prices for honey being offered this early in the season we had to agree with him that the market was discouraging.

Miscellaneous: We have several more chances for crops. The migratory beekeeper will move from flow to flow and when the season is finished we will have lots of honey and the way beekeepers are organizing promises a better day for beekeeping and beekeepers who lead. Let those follow who will.

The package bees and queen sale has been very encouraging to dealers who manage their business in a business-like manner.

The demand for wax is good although prices are little changed and most of the beekeepers think the price offered is too low.—Cary W. Hartman, Oakland, Calif.

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SOUTHERN CALIFORNIA, June 3.

Weather: Since our last letter we have had all kinds of weather, good, bad and indifferent. The orange, our earliest white honey source, bloomed over the usual period of from four to six weeks with possibly ten days of what might be termed good honey weather. The weather was cool, often really chilly, cloudy, drizzly. Eucalyptus, which is plentiful throughout the orange districts of California, seems to have been showing off this year. At no time has there been a dearth of blossoms. There seemed to be an unusual amount of pollen. The past few days have been warmer and now that the orange is past the weather is delightful.

Honey Crop: The old honey is all cleaned up and new honey is being extracted. Reports vary as to the amount of orange honey produced per colony. We will venture a guess that the average for Southern California will not exceed thirty pounds per colony for the four counties of Los Angeles, Orange, San Bernadino, and Riverside.

Black sage which usually blooms along about the time of the orange, has not yielded well this year. It yielded well last year and seldom gives a honey crop two years in succession. The white sage and wild buckwheat are just starting and we should get some surplus.

Markets: There does not seem to be much demand, at least we have heard of very few sales and buyers

seem to be waiting for the beekeepers to come to them. The beeswax market seems quiet with prices about a cent lower than was offered some months ago.

Miscellaneous: We just had a bully SHAKE. Got everybody out of bed at 12:30 A. M., but no damage that we have heard of. Just to remind us that He is still filling up a few hollow places in this old shell we are living on. We are, or are supposed to be, living just over what is known as the "St. Andreas Fault"—whatever that is. Just a settling into place of a portion of the earth's surface, so the scientists say. But it seems to have failed to shake any very interesting ideas into the head of the writer.

Drive along the highways at any time of the day or night and you can see truckloads of bees being moved. Where? Maybe you will find out when at your next visit to one of your out-apiaries you discover a load of bees has been placed within a short distance of your own. Of course, you are delighted but what is the use of telling him so. Seems that the only way is to just keep on sawing wood and let the other fellow do the same. Load a hundred colonies on the truck, travel ten or a hundred miles, set them on the ground, get what honey you can and hope that the balance will be on the right side of the ledger when the expenses are figured at the end of the season. Priority rights, phew?

A day or two ago I was looking over some apiaries that are in the white-sage, wild-buckwheat country. While there are something like one hundred acres of orange near one of the apiaries no surplus has been stored and unless there is honey coming in later the bees will need all the honey they have stored for winter. For some reason these orange trees never make an appreciable showing in the production of nectar. We wonder if it is owing to the location. Or is it on account of the number of bees in the locality, several hundred being within reach of the grove?

In 1932 we reported 3000 tons of honey for Riverside County and buyers active in securing it. With less than one-third this year little interest is shown. Are we beekeepers to blame for these conditions? Of course, we will come out of it, but when? — L. L. Andrews, Corona, Calif.

TEXAS, June 1.

Weather: The weather during the first half of May was a continuation of the prolonged wet and cold which prevailed during the latter two-thirds of April. What little stores the bees had on hand on April 8 soon disappeared due to cold, rain, and lack of bloom. Where bees were looked after feeding was the order of the day. This continued without a break until the 14th of May when clear weather allowed the bees to take advantage of the horsemint which had been in bloom for some time.

Honey Flow: As is generally the case in beekeeping the conditions changed from one of dearth to one of extreme prosperity almost over night. In yards where feeding was being done on Tuesday, a fine horsemint flow was on the following Sunday. By May 18 the horsemint flow was lost in a mesquite flow which has continued up to the last day of the month. A scale hive which weighed 105 pounds on May 13 on May 31 showed 244 pounds. Another hive on scales which weighed 85 pounds on May 15 weighed 147½ pounds on May 31.

Accompanying the change in field conditions came the change in bee activities. The queen breeders and package dealers lost heavily of their field force, consequently had a deficient number of live bees to fill orders. The queen breeders were unable to have cells accepted, virgins emerged, and virgins mated. The change that has come has made queen rearing easy during the last of the month. The indications are that the mesquite honey flow will last for probably two weeks. These conditions seem to exist all over the eastern half of the state and where no crop was expected now a fine crop of mesquite horsemint honey is ready for taking.

Miscellaneous: The beekeepers of Texas greatly regret the information that T. P. Robinson one of the old stand-bys of beekeeping in Texas was killed in a railroad accident at Garland, Texas, May 19. Mr. Robinson has been actively connected with beekeeping and beekeeping organizations for nearly fifty years.—H. B. Parks, San Antonio, Texas.

NEBRASKA, June 7.

Weather: It used to be "we need rain", now it's "we need dry weather." The month of May, far from normal, did not have a full clear day. So far our rainfall is well above normal, furnishing the much needed subsoil moisture depleted through successive years of drouth. We now need sunshine and drying winds to save a bumper wheat crop from rust.

Crop Prospects: Due to the excessive moisture all vegetation has made rank growth. Prospects for a good honey crop are the best in many years. Clovers are in fine condition and while there are far too few fields there is an abundance of clover growing along the roadsides. It would seem that seed has been there for years, lacking sufficient moisture to start growth. Yellow sweet clover began blooming May 20, about 10 days ahead of normal.

Condition of Bees: Winter losses were severe in this state. Much feeding was necessary this spring. Cloudy weather attended the fruit bloom and extended into dandelion bloom so bees profited little by either. Since beekeepers depend upon these two sources to build their bees up for the main flow, it has been necessary to feed heavily. At this time of the year, the bees usually have their hives full of honey and are ready to begin storing in the supers. Some beekeepers have preferred to feed heavily to prepare their bees to take advantage of the clover flow, rather than letting them build up on this flow, losing valuable time plus pounds of honey.

Many package bees were purchased to replace winter losses and to strengthen weak colonies. Installation proved an uphill job this year since we depend a great deal on fruit bloom in getting them nicely started. The writer has successfully installed packages upon five or six standard combs, sprinkled full of sugar syrup and with no supersedure in any colony thus established.

Honey Market: Movement of honey is slow, and too high prices tend to force consumers to buy cheap syrups.

Miscellaneous: It is too early yet to tell what the grasshoppers may do to the clovers upon which we depend mainly for our crop. The cold damp weather this spring has delayed the hatch, giving vegetation a good head start. With everything growing so rankly there is much more for the voracious hoppers to feed upon. The delay in hatching has enabled organizations to complete plans for poisoning. The campaign is to begin this week.

Beeswax: The price of beeswax is unusually high. During drouth years much equipment has remained idle and moths have ruined much comb. In order to harvest the crop that seems likely to be ours, it will be necessary to purchase much foundation.—Benj. Nielsen, Aurora, Nebr.

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NEW MEXICO, June 8.

Weather: This spring has been one of the most unusual on record. Exceedingly dry during May, we are now having glorious showers and heavy rains which should make the honey flow a real one. Thus far at this elevation there have been only the wild flowers and alders for the bees to work on but a few days will bring the Dutch clover into bloom, and soon after that the alsike will start.

Market: There remains a steady market for honey in this locality and very little, if any, of last year's crop remains unsold. While not able to use large quantities, this market still provides the main outlet for what is locally produced.

Production: The bees were taken from the cellar on Easter Sunday and are now ready to divide or produce honey. Bees in the lower altitudes along the Chama, Pecos and Rio have had more difficulty building up this spring due to the extreme dryness during May. However, now it appears that we will have our rainy season some two weeks earlier than usual and this will be of tremendous value to the honey crop and all farming in general.

Miscellaneous: It is hoped that, in the not too distant future this state will have a set of bee laws and a bee inspector. For a state not having them we are remarkably free of disease. In fact, much more so than many states spending considerable sums to eradicate it. It is this thought that prompts me to state the hope that we can get legislation to help keep the state clean before we have a job of cleaning to do.—C. A. Baltzley, Pecos, New Mexico.

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MINNESOTA, June 10.

Weather: After several years of below normal rainfall during which the water table has been gradually lowered, the level of all the lakes brought down, some of them disappearing completely, the white clover almost completely burned out at times, and a large number of fine old trees killed by drouth, the spring of 1938 has finally brought enough moisture to satisfy even the most pessimistic. In fact, some are even beginning to complain about too much rain, because they can't get a chance to plant their corn.

May gave approximately seven inches of rain, bringing the precipitation from January 1 up to nearly fourteen inches in the vicinity of St. Paul. In some parts of the state the precipitation has been even higher. Many of the lakes are back to their former level, and soil moisture is all that could be desired.

Crop Prospects: With all this moisture, honey plants are in excellent condition, but the same thing cannot be said for the condition of all the colonies. In the first place, the winter loss was heavier than had been anticipated. During the mild winter the bees had used up a large amount of stores. The fall of 1937 was unfavorable for brood development, and as a consequence colonies went into winter with too large a percentage of old bees. Following the winter loss, an abnormally warm early spring during which heavy brood rearing started was in turn followed by more than a month of rainy weather which prevented the bees from taking advantage of the fruit bloom and dandelion flows. As a consequence far more feeding has been necessary than for many springs past in order to keep the colonies from starving or seriously losing in strength. Even where feeding was done there was sometimes a serious lack of pollen.

Where stores of both pollen and honey are plentiful, colonies are building up rapidly, and if weather conditions continue in June as in May, we may expect that swarming will be prevalent, with a very noticeable difference in the strength of colonies in the same yard. A number of swarms were reported in the vicinity of St. Paul the first week in June.

While conditions look favorable at the present time for the beekeeper who has kept his colonies well supplied with stores, it is still much too early to say that a good crop is assured. Just as the poultryman shouldn't count his chickens before they are hatched, neither should the beekeeper count too confidently on his honey crop until it is in the can.

Miscellaneous: Minnesota beekeepers are looking forward to a joint meeting with North Dakota beekeepers to be held at Grand Forks, North Dakota, July 28 and 29.—Dr. M. C. Tanquary, St. Paul, Minn.

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BRITISH COLUMBIA, June 1.

Weather: Changes in the weather and in beekeeping plans have been numerous and somewhat trying this year to date. After a mild winter which left the bees in good condition and tree and plant growth promising, an unusually early season with cold nights in early April, retarded fruit bloom and made necessary much feeding. Even some confirmed believers in one story for wintering would have appreciated a food chamber of honey on the hive.

Weather later turned quite warm and bees near orchards gained an unusually heavy surplus causing some swarming where sufficient room had not been provided in advance. The first swarm of the season had an amusing angle to it as it obligingly swarmed while the beekeeper was working in the apiary and settled on the branch of an apple tree just six inches from a robin's nest where the bird had been sitting on three eggs. When things quieted down said robin was making noisy protest from a fence at a safe distance.

Supersedure: Package bees received on April 4 did not prosper as usual and there is no argument with us as to the advantage of wintered colonies over package bees. Division of colonies would work well if only we could be sure of getting sufficient early queens. An experience this spring seems to throw some light on the problem of supersedure. We use fifty to a hundred packages each year with practically no loss of queens and little supersedure. This spring package bees received were vicious hybrids and blacks, and loss of queens ran to 25 per cent and supersedure to another 15 per cent

with exactly the same methods used in hiving.

Pollination: Here in the Okanagan Valley arsenical poisoning has taken heavy toll of the bees during the last few years and Mr. A. W. Finlay, our Provincial Apiarist, reports visiting orchard after orchard from here south to the border where nothing remained save a row of empty hives.

The demand for bees for orchard pollination is increasing and growers admit that the set of fruit is becoming noticeably lighter each succeeding year.

We understand that in the neighboring State of Washington, in the Yakima Valley, hand pollination of apples and pears is being practiced and considered economically feasible and necessary where the shortage of bees is most acute.

Our charges for bees work out at one dollar per acre so figure it out for yourself.

Following unseasonably warm weather during May honey plants are making rapid growth but rain is needed to make our hopes of a good honey crop more secure.

Old honey is well cleaned up and prices have remained steady.—G. F. Pearcey, Kelowna, B. C.

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MONTANA, June 2.

Weather: The weather has been below normal all spring long. There have been a number of nice rains and the plants look better than they have in recent years. The Mormon crickets have been showing up in some parts of western Montana. Just now the prospect in this part is especially good.

Market: There has been no change in the honey market. Most of the beeswax was made up into foundation or traded for supplies at 25c a pound.

Miscellaneous: Bees gathered enough from dandelion to carry them over to the regular flow, but they have no surplus. Rains and cool weather with lots of wind have caused some chilled brood and held bees back. Many colonies will not be ready for the honey flow. Some three-pound packages have been shipped in to help build up weak colonies. However, the queens have superseded.

We have been getting some very fine reports from our honey buyers on the quality of our honey.

Two crews of men are being employed by the federal government to control crickets which are proving to be a serious menace in the west portion of the state. This menace occurs in some very fine honey territory where large apiaries are located. —Parson Pile, Corvallis, Montana.

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PENNSYLVANIA, June 6.

Honey Flow: The season has been a mixture of pleasant surprises and discouraging weather. The spring flow from fruit was considerably above normal in the southern half of the state. Many beekeepers obtained a surplus of twenty pounds or better while most colonies at least filled the brood chamber. The flow from fruit prevented many colonies dying from starvation.

Locust bloomed profusely but bad weather did not permit the bees to work the blossoms except on one day. Records in three counties, Cumberland, York, and Adams, showed gains for this day of 17, 20 and 15 pounds respectively. These gains were each made from a strong colony on scales. The frost killed locust leaves and blooms in some areas, but did not damage other nectar producing blooms except sumac. The sumac will grow out again and probably produce a surplus crop of nectar as usual.

Clovers are now yielding a good surplus. A colony on scales in Southern Pennsylvania gained an average of 12 pounds a day on June 1, 2, and 3, and it is entirely possible that the daily gain has been maintained to the present, June 6. This colony was producing comb honey and gathered nectar from alsike, Dutch and yellow sweet clover. The honey flow is general over the state. Colonies examined in Susquehanna, Luzerne, Monroe and Northumberland Counties were also making gains even though they were not as heavy as the gains made in the southern half of the state.

The soil conditions are ideal for a continued flow, however, hay-making is already beginning, which will naturally reduce the alsike clover acreage. The Dutch clover is very abundant in the eastern half of the state. It looks like a rug in favorable sections of many pastures and

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lawns. This flow should continue for at least a month, weather permitting.

Honey Market: The supply of honey from last year's crop is entirely exhausted. Honey has not been so scarce in the state for many years. Number 1 or Fancy light comb honey has been much in demand with no supplies available.

The market demand has dropped off considerably during the past few weeks due probably to the effect of warm weather.

Miscellaneous: Swarming has been quite troublesome for the past two weeks. Colonies run for extracted honey reared queen cells extensively even though they had brood in three bodies with none of the bodies full. It seems as though the bees are able to anticipate a heavy flow and build queen cells in spite of everything the beekeeper might do.

The winter losses were small. In some sections, however, a considerable number of colonies died from starvation. A good many are now weak and unable to take full advantage of the flow because of a shortage in brood rearing earlier in the season.—E. J. Anderson, State College, Pa.

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ONTARIO, June 7.

Weather: The past month has been a trying one for the bees here in Ontario, and incidentally the beekeepers have had their worries in several localities. The weather men tell us that every year gives us about the same average temperatures, so after 75 degrees of heat in April on different dates, of course May temperatures must necessarily be lower than usual to make up the average for the two months. And that is just what we got, for during most of May we had cool, cloudy and windy weather and locally at least we had but three days that bees worked to any extent on fruit bloom and dandelion.

With many colonies short of stores in early spring, only one thing could happen under such circumstances. Where feeding was resorted to as it was in some of our apiaries, and in the apiaries of many others, colonies are at present in fair condition and we find most hives filled with brood from side to side. Speaking to different inspectors a few days ago, they all told the same story. The majority of apiaries are very short of stores and in many cases numbers of colonies have actually starved to death. Feeding in the spring is a nightmare and we have never done much except as a necessity. We hope that this work is over for this year. Alsike fields are quite pink already.

Condition of Colonies: Taking a survey we find some surprises. We have bees in standard single bodies, many with food chambers and a few with two full-depth bodies. The latter required little if any feeding and three weeks ago they appeared to be way ahead of the other colonies. But today many of the single-body colonies that were destitute of stores three weeks ago are showing as many or more field bees than those that were not fed. Of course, these colonies which were short of stores were fed every five or six days during all the cool, cloudy weather of fruit bloom while nothing came in from outside to speak of. Please understand that we did not enjoy this feeding game as it is hard on the nerves to be worrying about starving bees in the spring and it is also hard on the pocketbook. And yet at the same time I have grave doubts as to the truth of the old teaching that a colony with a great lot of stores will necessarily build up faster than one with less stores but that has food coming in all the time.

Crop Prospects: As already intimated, many colonies are sadly depleted of bees so the crop cannot be expected to be as large as when colonies are uniformly strong. But in our own apiaries we find the majority of colonies in fair condition and as already stated the amount of brood is as great as in other years. The season is early and if we get sufficient precipitation clover may last a long while, particularly in localities where alfalfa is grown and follows alsike. Clover looks well and alsike is already in bloom in high land, but so far we have had weather only warm enough to register in the sixties so no nectar is coming in. But we feel optimistic and we are at least hoping for a crop whether we get it or not.

Market: Honey is scarce locally, and last week while in Toronto I made a short visit to some wholesale

houses that I am acquainted with. The only quotation I was given for sixties—and the house had only a few—was 10½ cents. While we cannot expect anything like that for a new crop yet it is a good thing to have no surplus carried over from former years.

Miscellaneous: With no weather for bees to work and none fit for beekeepers to examine the colonies during fruit bloom, for the first time in our experience we did not get half of our queens clipped nor our colonies overhauled before clover bloomed. So now clover is opening and we have many colonies not supered. It means that some colonies will no doubt swarm before we can attend to them, and in a few minutes I expect to jump in the car and visit an apiary of 100 colonies, sixty miles from home. Last visit was ten days ago when we took sixty ten-pound pails of syrup to the yard as the bees were short of stores and at that distance we could not afford to take chances of nectar coming in or failing to come in. So I am taking 300 pounds of syrup along hoping that I will not have to use it.

So if these notes are just a bit more erratic than usual (they are always bad enough) please remember that while they were being written the writer had his thoughts devided between what he was trying to write, and an apiary sixty miles away in a very doubtful condition. Here's hoping that next month I may be able to report that I found the bees working on clover and that I hauled this syrup back home again.—J. L. Byer, Markham, Ontario.

Dr. Bodog F. Beck's New Book, "Honey and Health"

Review by E. R. Root

(Continued from last issue)

Honey for Diabetes

By permission we are making the following extract from one of Dr. Bodog F. Beck's letters in reply to one from E. R. Root.

"On page 386 of the June Gleanings, your answer on Honey for Diabetes is very informative and perfectly correct. To corroborate other testimonies about the value of honey in diabetes I would mention Dr. Lorand's personal communication which recently stated that he had saved many of severe diabetics by suggesting honey with their food. Maybe another of my recent experiences will interest you. Last week Mr. J. A. Evans of Ellwood City, Pennsylvania, presented himself in my office with his wife who is a victim of arthritis of many years standing. Mr. Evans is a manufacturer of axles for airplane engines. He told me that he knew your father very well and also called on you in Medina.

"Mr. Evans reported to me that he suffered from diabetes 15 years ago. The doctors put him on a strict diet but without beneficial effects. He made up his mind to use honey liberally in his diet against the advice of his physicians and the effect was, the way he expressed it, simply miraculous. The sugar disappeared entirely. It made a new man out of him. His weight used to be 250 pounds and by taking honey he reduced to 195 pounds. His girth was 52 inches and today is only 42 inches. There has been no sugar in his urine for over ten years. He is the picture of health and is a changed man. Mr. Evans is 70 years old and his firm took out life insurance just several months ago and one of the large companies passed him with normal rates. He promised to report himself on such testimonials. An intelligent and honest person cannot be ignored by most skeptic physicians. This is only one more proof of the value of honey in diabetes. You may write to him yourself and confirm his statement."

As the reader may not have at hand the copy of Gleanings referred to, we are presenting the same copy again.

"Honey is being used by some diabetics in very moderate quantities, with most beneficial results. Much, of course, depends upon the individual and the stage of the disease. If the case is far advanced, probably no form of sweet, even honey, can be used. In any event, we strongly advise everyone suffering from diabetes **mellittus** to try out a little honey, preferably tupelo, mountain sage, or sourwood, but in very moderate quantities, and always under the direction of a competent physician. If sugar shows in the urine, or in the blood, then cut down the quantity of honey taken, or discontinue it altogether. A physician will be able to advise on this point. We have one man in mind, whose case was pronounced advanced diabetes, and who is still in good health at the age of eighty. However, he says that he uses only very small quantities of tupelo honey and no other form of sweet."

We wish to repeat the suggestion made in a previous issue of Gleanings, namely, that our subscribers buy a copy of Dr. Bodog F. Beck's new book, entitled, "Honey and Health", which can be secured at this office, or from Dr. Bodog F. Beck, 116 East 58th Street, New York City. After looking over this book, present it to your physician, requesting him to read it and look into Dr. Beck's work very carefully, and be convinced not only of the value of honey as a food, but also of the value of bee stings in the cure of arthritis and rheumatism.

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Asked and Answered

How to Get Bees to Work in Supers

Question.—I put on comb honey supers this year shortly after clover blossoms began to appear. The bees have been slow about entering the supers. What can I do to make them start work in them?—M. R. Sloan, Illinois.

Answer.—Colonies must be strong, boiling over with bees and there must be a good honey flow on for bees to start work in supers promptly after being put on. In the production of comb honey a few bait sections (partly drawn-out sections) in the first super put on, help to get bees working in the sections. When the bees once get started going up they are likely to continue work in supers, provided, of course, conditions are favorable for nectar secretion. As before stated, colonies must be very populous and nectar plentiful for successful comb honey production.

Comb and Extracted Honey from the Same Colony

Question.—Is it possible and practicable to produce comb and extracted honey together on the same hive?—A. C. Blake, Ontario.

Answer.—Yes. Read the article entitled "Both Comb and Extracted Honey", by Edwin J. Anderson, pages 294 and 295 in the May, 1938, issue of this journal. Some comb honey producers have their supers arranged, each with two shallow extracting combs, one on each side of the section holders to induce the bees to enter supers more readily. Mr. Anderson recommends the use of shallow extracting supers. When the first shallow extracting super is partly filled, comb honey supers may be put on and the bees are likely to start work in them, because they have begun to go above into the supers.

The Use of Queen and Drone Traps

Question.—Just how should I use the queen and drone trap to the best advantage?—Milton Sloan, Ohio.

Answer.—A queen and drone trap is intended primarily for the beekeeper who does not have the wings of all queens clipped. Traps should be placed on the hives just before swarming time. When a swarm comes out, the queen is trapped in the compartment above the main entrance where the worker bees pass out of the hive through the wires. After the swarm issues and the queen is trapped, if increase is desired, the trap containing the queen is transferred from the front of the old hive to a new hive placed on the old stand and the old hive is set aside about six or eight feet on to a new stand. The small slide found in the middle of the queen and drone trap is pulled out and the queen is allowed to run down out of the compartment in which she was trapped into the hive. The bees that are flying around in the air, not wishing to leave without the queen, will return to the hive with the queen. The old colony on the new stand will rear a young queen. The swarm on the old stand will store considerable surplus honey, that is, if there is a good honey flow on. If increase is not desired, queen cells should be cut or destroyed in the old brood chamber and the queen returned to the hive. The use of queen and drone traps should not be encouraged generally as they tend to prevent free and easy entrance of worker bees. However, they may be useful to beekeepers who understand how to manipulate them and especially in the production of comb honey where swarming is difficult to control. In apiaries where queen breeding is carried on drone traps may be used to catch black or hybrid drones.

Getting Bees From a Tree or Siding of a Building.

Question.—What is the most convenient way to get a swarm of bees from a tree or a building?—J. C. White, Pa.

Answer.—The easiest way is to cut down the tree or remove some of the siding of the building, as the case may be; but if this is impractical, a device known as the bee-escape may be placed over the opening or entrance leading to the bees. The bee-escape allows the bees to pass out, but will prevent them from returning. If a hive containing comb is arranged close to the opening on the outside, practically all the bees may be secured in this way, except the

queen. If brood is at hand, it would also be an advantage to put a little unsealed brood with enough bees to cover it, in the hive. These bees will probably raise themselves a queen from the brood given them, but it would be much better to introduce a laying queen. In the course of about six weeks most of the bees will be in the new hive. There will be some brood and the queen left in the enclosure in the tree or building. These may be killed by putting Cyanogas in the nozzle of a bee smoker and blowing it into the opening leading to the bees. After a few days the bee-escape may be removed and the bees in the hive allowed to rob out the honey within the enclosure. After all the bees and the honey are in the new hive, it can be removed; and, if taken away, it should be located a mile and a half, or, better, two miles away. Should the hive be moved only a short distance, most of the bees will return to the old location and re-enter the enclosure. If it is not practical to move the bees a distance away, the hive may be moved a few feet two or three times a week, until it is the desired distance from the enclosure. If moved too great a distance at one time, the bees will invariably go back to their old location. After the bees are out of the enclosure, the hole should be covered with a piece of tin.

Keeping Bees in Buildings

Question.—Is it possible to keep bees in a building?—R. L. Murry, Mich.

Answer.—Bees can be kept inside of buildings, and for people who live in the city, it may be an advantage to have the bees placed in an upper story or attic. This brings their line of flight up from the ground where they do not interfere with anyone. Bees that are being handled in a closed building are much less inclined to sting than when they are out in the open. The hives, not being exposed to the weather, will last a lifetime and do not need painting. If the room is cold during the winter, the hives can be covered with straw or blankets which will be sufficient protection in any climate. The hives should stand one foot from the wall and an opening made through the siding for each hive and between this and the hive entrance a covered passageway provided so that the bees can go outside but cannot fly out into the room. The room should have windows enough to give good light which is necessary when examining the frames, especially when one is hunting for the queen or looking for eggs or small larvae. Windows should be arranged so that they can be opened to let out the bees which leave the hives while they are uncovered. If these bees are allowed to go outside they will return to their hive through the regular entrance, otherwise they would be lost.

How to Get Rid of Ants

Question.—Ants are numerous around my hives. How can I get rid of them?—J. L. Smith, Ky.

Answer.—Ants seldom trouble good colonies of bees in the North, but in the South where they are more numerous, radical measures must sometimes be taken. In order to get rid of them, they must be cleaned out of the hives and the hives placed on stands or benches, the legs of which rest in cans filled with some liquid such as coal tar, or crude petroleum, that will prevent the ants crawling up into the hives. All ant hills or nests in the apiary should also be destroyed. To do this, make several holes, an inch or so in diameter, about a foot deep through the nest. Then pour a tablespoonful of carbon bisulphide in each hole and stop up the holes with earth so that the fumes may permeate every part of the nests. Great care should be taken, since the carbon bisulphide is very explosive when mixed with air. If the nests are not large, kerosene may be used instead of carbon bisulphide—about three times as much of the kerosene being required.

Using Combs of Granulated Honey

Question.—What is the best method of disposing of extracting combs containing granulated honey?—Carl N. Holcomb, New York.

Answer.—Some experiments have been conducted along the line of putting combs of crystallized honey into a hot room, maintaining a temperature for a time of 103° F., which is considerably below the melting point of wax, namely, 143° F. As we understand it, these experiments have not been altogether satisfactory. The trouble has been that the weight of the honey had a tendency to stretch the combs as the temperature goes above 100°. Then, too, the cost of the apparatus necessary for doing this work would hardly be justified. In our experience, we have found that the best way to dispose

(Continued on page 469)

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Talks to Beginners

Editor M. J. Deyell in the apiary.

A Most Peculiar Season

As I have perhaps mentioned in previous talks, one thing that makes beekeeping so interesting is the variability of seasons. No two seasons are exactly alike. Usually one extreme follows the other. A good season may be followed by a poor one, or, vice versa. A rainy cool spell during which bees are kept in their hives is usually followed by weather favorable for nectar secretion and bee flight.

This season thus far has been rather peculiar, especially in the northern states and Canada. An early warm spell of weather brought on early brood rearing. This meant an unusually heavy consumption of stores during the spring months. In this locality, and, as a matter of fact in a number of the northern states, early May was cold and unsuitable for normal bee flight. Many colonies that did not have an adequate supply of honey to begin with had to be fed. In fact, a few apiaries that were reasonably well provided with honey were reduced down to very scanty rations and were living from hand to mouth for a time before the main flow started.

Importance of Ample Stores

These unusual and changing weather conditions tend to keep us beekeepers on the alert. The most important factor in apiary management, it seems to me, is providing a super-abundance of honey for each colony.

Early this spring I attended a beekeeper's meeting in an adjoining county. The subject of food chambers was up for discussion. One of the beekeepers said that he was using deep food-chambers and found that colonies with these deep food-chambers appeared to have too much honey early in the spring and he wondered what he should do with this extra honey. I haven't had a chance to talk with this beekeeper since but I dare say his colonies had none too much honey this year, the latter part of May, just before the clover honey flow began.

Main Honey Flow Starts Early

This year, the main honey flow in the clover region started about ten days or two weeks earlier than usual, due to the advanced condition of honey plants. In fact, the main honey flow began before beekeepers were ready for it. In some instances supers were not put on in time and consequently colonies became congested and swarming resulted.

A Bad Season for Swarming

Another factor that has aggravated swarming is the prevalence of changeable and showery weather. During fair, warm weather when bees can fly every day colonies are not so likely to swarm as they are during showery muggy weather. When strong colonies are kept in their hives a few days each week due to rains, they are likely to start queen cells and swarming results later.

Comb Honey and Swarming

Some of you beginners are doubtless producing, or trying to produce, comb honey. During the present season you are perhaps troubled with bees building queen cells and swarming. The weather has been partly to blame.

A Swarming Experience

In my apiary of about fifty colonies I have an unusually populous colony that I decided would make a good comb honey colony. We like a little comb honey for table use. On June 11 this colony had three partly filled supers of extracted honey. I shook the bees out of these supers and gave the supers to other colonies, then gave this strong colony two comb honey supers. On the evening of June 15 I looked into the supers and found the bees starting in the sections. I then examined a few combs in the brood chamber and to my surprise found two queen cells just being started, which I destroyed. It was then too late in the day to give the remaining combs a thorough inspection and I must have over-

During a good honey flow it is sometimes necessary to pile supers high and to prop each skyscraper.—Photo by John A. Hughes, Duluth, Minn.

looked queen cells. On June 18, three days later I visited the apiary about 10:30 in the morning and before I could open the hive out came an enormous swarm from this comb honey hive. The bees clustered in a most awkward place in the crotch of an old apple tree some distance from the ground. With the aid of a ladder and a saw I captured the swarm and put it into a new hive on the old location after setting aside the parent colony on a new location some little distance away. I also shook some of the bees from a few of the combs in the parent hive, in front of the new hive containing the swarm.

I feel sure this swarm will now go to work and pile up some surplus comb honey. I was lucky in visiting the apiary when I did, or I would have lost the swarm, as I did not have the wings of the queen clipped.

Getting Supers On In Time

I hope you beginners realize the importance of putting supers on in ample time, a little in advance of when they are actually needed. Bees need plenty of comb space for ripening honey. Nectar is between 65° and 75° water. The nectar is distributed in empty cells throughout the supers so that the excess water may be driven off by the bees fanning their wings, before the nectar is reduced down to the consistency of honey.

Removing Surplus Honey

Beekeepers are naturally anxious to take off honey as early as possible. Some remove combs of honey for extracting before the honey is properly ripened. Honey taken off too early is likely to ferment. Extracting combs should not be removed from colonies until the combs are at least three-quarters capped over. Comb honey should not be taken off until the sections are entirely capped. It is well, however, to remove it before it becomes travel-stained.

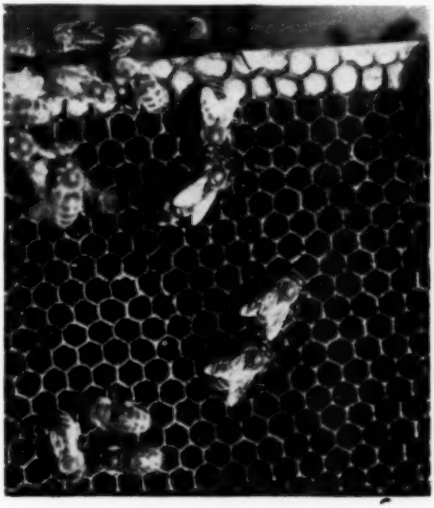
How to Take Off Honey

Beginners with only a few colonies can remove extracting combs by brushing the bees off the combs. Sections of comb honey may be removed in like manner.

A contrivance called a bee escape is very convenient and, in fact, indispensable in any apiary. This device fits into the hole of the inner hive cover, when the wooden block is removed. The inner cover is then placed underneath the super to be removed and the bees go down through this escape into the brood chamber and are unable to return to the super. The bee escape is listed in the bee supply catalogs.

From Hive to Table in Three Hours

It is well to get honey extracted from combs as soon as possible after they are



THE BEE AT HOME

Intimate glimpses of the home life of the queen. A worker offers her majesty a sip of nectar. Such pictures and the story that goes with them are of great interest to persons who have never seen the inside of a beehive. Photo by Natt N. Dodge.

removed from the hives. Honey that is warm, right off the hive, is extracted easily and can be strained quickly.

Two years ago I brought in two full supers of combs after brushing the bees off, and extracted the honey within an hour after it was taken from the bees. We had some of the honey for supper that evening and our family pronounced it the best honey they had ever tasted. It was pure white clover honey.

Extracting Equipment

A small extractor, a two or three frame machine, is large enough for the beekeeper with from one to twenty colonies. The accompanying picture shows equipment that can be used by any beginner. The room used for extracting should have the windows screened to keep out robber bees.

How to Operate the Extractor

The extractor should be placed on a stand of some sort and anchored down securely so that it does not rock while running.

Combs of approximately the same weight should be selected so that the machine may not be thrown out of balance. After combs are uncapped with a hot knife they are placed in the baskets of the extractor. A part of the honey is thrown out of one side of the combs, which requires only a few revolutions. Then the combs are reversed and all of the honey is thrown out of the opposite sides. The combs should be reversed again and all of the honey thrown out of the first side. If all the honey were thrown out of the first side the weight of the honey in the opposite sides of the combs might break the mid-ribs of the combs.

The extractor should not be turned too rapidly at first, until some of the honey is removed. Some good combs are frequently broken due to carelessness.

Straining Honey

Two thicknesses of fine cheesecloth should be used for straining honey into the honey tank. During warm weather when honey is extracted immediately when removed from the bees it will run through the cheesecloth. However, during cool weather it may be necessary to heat the honey before straining it.

Selling Honey Locally

There is likely to be a large crop of fine clover honey this season throughout most of the clover region. Many backlot beekeepers will have honey to sell. This situation will help our industry, because thousands of people will have an opportunity to buy unusually good quality honey direct from the producer and these customers will undoubtedly tell their neighbors about the honey. When people taste good clover honey fresh from the hive they will go back for more and this is bound to stimulate a demand for honey and bring it to the attention of many who would not otherwise know about it.

A complete extracting outfit: an extractor anchored on a box, a wash boiler to receive cappings, a ten-pound pail to heat water on lamp stove, uncapping knives, honey tank with strainer cloths

To Sell You Must Tell

If you have some perfectly good honey to sell you must let people know about it. How are you going to do this? Well, you could go up and down the streets of your town calling at the various homes, taking orders, delivering later. An effective way to sell honey locally is to put a small classified ad in your local newspaper, then erect a honey sign in front of your home. If the price is right and customers receive good quality honey and service, a profitable business can be built up.

Selling Direct from Tank

A few beekeepers are selling direct from the honey tank, the customers furnishing the containers. It is necessary to have a good tested scale for weighing out the honey as it is drawn from the tank.

Buy and Sell Here

CLASSIFIED ADS

Only responsible advertisers and honest advertisements will be admitted to these columns. References required from new advertisers not known to us. Rate—7 cents per counted word each insertion. Each initial, each word in names and addresses, the shortest word such as "a" and the longest word possible for the advertiser to use, as well as any number (regardless of how many figures in it),count as one word. Copy should be in the 15th of month preceding.

HONEY FOR SALE

AMBER in 60's, $7.50 per case. E. S. Miller, Valparaiso, Indiana.

BUCKWHEAT HONEY in kegs. Walter Spink, Varysburg, N. Y.

FANCY clover honey, case or quantity. J. Stahlman, Grover Hill, Ohio.

FOR SALE—Extracted and comb honey. M. W. Cousineau, Moorhead, Minn.

HONEY—Light and light amber extracted. F. W. Lesser, Fayetteville, N. Y.

NEW CROP comb and extracted, July 15. Howard Grimble, Holcomb, N. Y.

CHOICE MICHIGAN clover honey in new 60's. David Running, Filion, Mich.

MICHIGAN white clover honey. New sixties. Orval Dilley, Grand Ledge, Mich.

CHOICE CLOVER and light amber honey in 60's. The Hubbard Apiaries, Onsted, Mich.

CHOICE MICHIGAN clover honey in new 60's. Arthur Thayer & Sons, Freeland, Mich.

MICHIGAN'S finest well-ripened white honey in new 60's. Jay Cowing, Jenison, Mich.

NEW TUPELO HONEY. Barrels, 7c; sixties, 8c. Stevenson's Apiary, Apalachicola, Fla.

WELL RIPENED clover extracted in sixties, 8c, amber 7½c. H. G. Quirin, Bellevue, Ohio.

CHOICE new white clover honey in new 60's. Sample 10 cts. Noah Bordner, Holgate, Ohio.

CHOICE white clover honey in 60-lb. cans. R. C. Bish, successor to Moore Apiaries, Tiffin, Ohio.

NEW CROP clover honey in 60's, and five pound pails. C. J. Baldridge, Romulus, New York.

ORANGE, palmetto and mangrove honey in new sixties. Peter W. Sowinski, Fort Pierce, Florida.

NEW CROP white clover honey No. 1 comb, $3.50 per case. Extracted, 8c in 60's. F. J. Smith, Castalia, Ohio.

NEW WHITE CLOVER comb, 12 to 16 oz. Very nice. 24 sections, $3.50. Clarence Engle, Kearneysville, W. Va.

NEW CROP clover honey, at right prices, truckloads delivered within 200 miles. M. E. Ballard, Roxbury, N. Y.

HONEY FOR SALE—All kinds, any quantity. H. & S. Honey & Wax Co., Inc., 265-267 Greenwich St., New York, N. Y.

FOR SALE—Finest white comb and extracted honey, in YEARS. Write for prices. N. B. Querin & Son, Bellevue, O.

COMB HONEY—Fancy amber or buckwheat, $2.50 case; light amber extracted, 7c; buckwheat, 5c; dark capping honey, 4c. Write for quotations on new crop clover. C. B. Howard, Geneva, N. Y.

SELECT LOTS—Extracted honey. Prices right. Write us about your needs. A. I. Root Co., 224 West Huron St., Chicago, Ills.

CHOICE orange and gallberry honey, $4.80 in 60's; 6½c lb., 40 and 50 gal. barrels, F.O.B. Sample. 15c. D. P. Green, Deland, Fla.

HOWDY'S HONEY—New crop will be ready this month. A few cans of old crop extracted to close out. Howard Potter, Ithaca, Michigan.

WILL CONTRACT 1938 crop white clover extracted honey, 8c per pound in quantity lots. L. S. Griggs, 711 Avon St., Flint, Mich.

CHOICE white sweet clover, also extra light amber honey in new 60-pound tins by the case or carload. Dadant & Sons, Hamilton, Illinois.

FOR SALE—New crop finest white clover honey, case or carlot. Price on request. Sample, 15c. Jos. H. Hoehn & Sons, Ottoville, Ohio.

NEW 1938 TEXAS catsclaw honey in 60-lb. cans, 6 lb. F. O. B. Station. Not less than 120 lbs. sold. Sample 10c. Milam Lambright, Marathon, Texas.

CLOVER HONEY FROM CLOVERDALE, Ohio's finest clover extracted in 60's. Sample, 10c. Prices upon request. The Cloverdale Apiaries, Cloverdale, Ohio.

HONEY PACKERS—Write us for prices on carload lots of California and western honeys. We stock all varieties. Hamilton & Company, 108 West Sixth St., Los Angeles, Calif.

NEW YORK State comb and extracted honey, buckwheat and clover, any quantity, all size packages. Five-pound pails my specialty. Edward T. Cary, Midland Ave. and Tallman St., Syracuse, N. Y.

NEW YORK STATE clover in 60, 5 and 2½ lb. sizes by case or truckload. Write your needs for delivered prices. Sample, 10c. Also limited amount of comb. Buckwheat in season. Earl Rulison, Route 1, Amsterdam, N. Y.

Our new crop Michigan clover honey should be ready for the market this month, July. We contract to supply our customers the year round. Write us to be sure of your supply when you need it. E. D. TOWNSEND & SONS, Northstar, Michigan.

HONEY AND WAX WANTED

BEEKEEPERS TAKE NOTE—We will not guarantee any honey buyers' financial responsibility and advise all beekeepers to sell for cash only, or on C. O. D. terms except when the buyer has thoroughly established his credit with the seller.

WANTED—Truckload 1938 clover honey. Must be very best grade. Ellsworth Meineke, Arlington Heights, Ill.

WE BUY AND SELL ALL KINDS COMB and extracted, carloads and less. H. Blitz, P.O. Box 3452, Philadelphia, Pa.

SELL your honey to Mizerny Meat & Poultry Co., 28 N. Superior St., Toledo, O. Highest cash price paid for pure honey. We buy and sell honey, any quantity, from can to carload Call for quotations—Main 1174.

XIIM

Italian Carniolan Caucasian QUEENS

Reared in separate apiaries.

Breeding Carniolans from Imported Stock.

50 cents each.

RONALD KIRK, Rockton, Pa.

MOUNTAIN GRAY QUEENS

Quality high **Prices low**

We thank you very much for the business sent us. Each order sent us will receive careful and courteous attention. Prices: Untested queens, each 50c; Tested, each $1.50; Select tested, each $2.00. Breeders, each $5.00.

BOLLING BEE CO.
Bolling, Alabama

Quick Service Dependable Selected ITALIAN Queens

Wire Us Your Orders
July, 50c.
THE PUETT COMPANY
Hahira, Ga.

FOR SALE

Pure Italian Bees and Queens

Nothing but the best queens, 50c each. Bright yellow and three-band. Subject to dealers discount. You send for them—they go.
GRAYDON BROS.
Route 2, Greenville, Ala.

WANTED—Comb, chunk comb, white and light amber extracted honeys. Any amount. Central Ohio Apiaries, Millersport, Ohio.

WANTED—Carlots of honey, state quantity, shipping point and price. Mail sample. Bryant & Cookinham, Inc., Los Angeles, Calif.

WANTED—White and Amber Extracted Honey, any quantity, also Beeswax. Write The Fred W. Muth Co., Pearl & Walnut Sts., Cincinnati, Ohio.

FOR SALE

USED ONCE 60-pound honey cans, cases. Free from rust. Leon Short, Zion, Ill.

BEEGONE takes off honey. Pint sample, 60c prepaid. Honey House, Adrian, Michigan.

ELECTRIC FENCER—$9.75 complete. Guaranteed. Details Free. SENTINEL, Dept. L-865, Cincinnati, Ohio.

ATTENTION Minnesota beekeepers: Write me for attractive prices on Continental cans. Gordon A. Bell, Badger, Minn.

PIERCE QUEEN GRAFTING TOOLS and electric uncapping knives. Free illustrated descriptions. 340 Crosby St., Altadena, California.

65 CASES 60-lb. honey cans, perfect, both cans and cases used once. 50c per case of two cans. J. K. Wolosevich, 6315 So. Damen Ave., Chicago, Ill.

ATTRACTIVE prices on bee supplies and comb-foundation. Send for catalog. Saves you money. The Fred W. Muth Co., Pearl & Walnut Sts., Cincinnati, Ohio.

WRITE FOR CATALOG. Quality bee supplies at factory store prices. Prompt shipment. Satisfaction guaranteed. The Hubbard Apiaries, Onsted, Michigan.

FOR SALE—Comb foundation at money-saving prices. Plain, wired and thin section. Wax worked at lowest rates. Comb and cappings rendered. E. S. Robinson, Mayville, N. Y.

YOUR WAX worked into quality medium brood foundation for 15c pound; 100 pounds, $11.00; thin super, 22c. For sale, medium brood, 10 pounds, $5.00. Fred Peterson, Alden, Iowa.

CARTONS for Cut Comb Honey. New attractive designs with your name and address. Low prices. Fast service. Samples on request. May Carton Co., Box 257, Traverse City, Michigan.

QUALITY packs of pure maple products, buckwheat and clover honey in latest styled packages, all sizes. Prices are right. May we have a trial order from you. Northern Maple Syrup Co., Liverpool, N. Y.

COMPLETE queen painting outfits, $2.00 postpaid. We save your time, we save you money. You save your queens, and get more honey. Southwick Apiaries, 176 Waban Avenue, Waban, Massachusetts.

FOR SALE—Fine quality queen mailing cages; Root quality bee supplies; both comb and extracted honey. Orders filled promptly. Write us or drive over M53, fifty miles north of Detroit. Hamilton Bee Supply Co., Almont, Michigan.

$11.00 is our price for working 100 pounds of your wax into medium brood. Our large modern bee hive factory is manned by experienced workers, milling thousands of pounds of comb foundation and hundreds of thousands of board feet of lumber into bee hives annually. QUALITY AT LOW COST is our motto. Free catalog. Free shipping tags for your wax. The Walter T. Kelley Co., Paducah, Kentucky.

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ITALIAN QUEENS, W. G. Lauver, Middletown, Pa.

ITALIAN BEES that please. Selected queens 60c each. Reacroft, Reynoldsville, Pennsylvania.

REQUEEN your bees with best quality Italian queens at 50c each. Anderson Bee Co., Opp, Ala.

EMPIRE STATE STRAIN Italians. Bred for honey production, 50c each. Coggshall & Son, Groton, N. Y.

GOOD THREE-BAND Italian Queens, ready to send, at market price, anytime. D. W. Howell, Shellman, Georgia.

HIGH QUALITY ITALIAN QUEENS, 40c postpaid, any number, Ephardt's Honey Farms, Luling, Louisiana.

TO MAKE SURE of a good honey crop, try our Three-banded Italians. Alamance Bee Company, Graham, No. Car.

GOLDEN ITALIAN Queens, untested, 50c; tested, $1.00; select tested, $1.50. Sam Hinshaw & Son, Randleman, N. C.

PACKAGE BEES AND QUEENS—Express or Parcel Post. Thrifty stock and gentle. Crenshaw County Apiaries, Rutledge, Ala.

CAUCASIAN QUEENS 50 cents each. 15% to dealers. Safe arrival, satisfaction, prompt shipment. Lewis & Tillery Bee Co., Greenville, Ala. R. 4, Box 132.

Long-tongued Caucasian bees and queens. Gentle, prolific, hardy. Better honey gatherers, winter better. Queens, 50c each. 15% discount to dealers. P. B. Skinner Bee Co., Greenville, Ala.

ITALIAN QUEENS, carefully reared, high producing. European foulbrood resistant. New Jersey Experiment Station stock, 75c. Spicer stock one dollar. Circular. E. G. Carr, Pennington, N. J.

LEATHER-COLORED Italians. Best bees on earth, we think. Young laying queens, full of eggs and pep, 50c each. Quick shipments on large or small orders. Discount to dealers. Diemer Bee Co., Liberty, Mo.

GOLDEN QUEENS—Excellent quality that produce hardy, gentle workers, personally reared. Untested, 50c; tested, $1.00. Health certificate. Satisfaction guaranteed. O. E. Brown, Route 1, Asheboro, N. C.

GOLDEN ITALIAN QUEENS that produce workers, very gentle to handle, good honey gatherers. Health certificate, satisfaction guaranteed. Select tested, $1.50; tested, $1.00; untested, 50c. D. T. Gaster, Rt. 2, Randleman, N. C.

EXTRA YELLOW Italian queens that produce bees a little more yellow than three-banded; more gentle and just as good workers. Untested, 50c each; tested, $1.00. Health certificate and satisfaction. Hazel V. Bonkemeyer, Randleman, N. C. Route 2.

CHOICE bright Italian queens that are a pleasure to work with and be proud to own. The stock has been bred and selected in the North the past 34 years for good winterers, hustlers, gentleness, and fine color; 75c each; dozen, $8.00; breeders, $6.00. Emil Gutekunst, Colden, N. Y.

300 COLONIES bees, mostly 10-frame, (migratory outfit). Bees guaranteed free from disease. 700 supers drawn comb, 300 additional bottom boards, 200 top screens, excluders, honey tanks, etc. Also V-8 truck, 150 colony capacity. With or without honey crop. Further information on request. No triflers wanted. W. C. Long, Millville, Pa.

"She-suits-me" queens, 3-banded Italians, most excellent strain: One queen, 75c; 3 queens, $2.00. Stamps accepted for single queen.

Koolairy veil, $1.50 postpaid. SAFIN queen cage, $1, for ten; 15c for one.

ALLEN LATHAM
Norwichtown, Conn.

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"Magnolia State" Strain Italian Queens, 50c each.

If we can't put at least 50c worth of value into our queens, we don't want your money for those worth less. We are maintaining cell-builders and nuclei only in proportion to seasonal demand, which assures our usual HIGH STANDARD of QUALITY.

JENSEN'S APIARY CO.,
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QUEENS

Italians	Caucasians
1 to 49	.50 each
50 to 99	.45 each
100 or more	.42½ each

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Package Bees and Queens

Superior Quality

Caucasian or Italian. Prompt delivery on every order. 2 lb. and queen, $1.95; 3 lb. and queen, $2.55. Untested Queens, 50c Disease free.

Safe delivery guaranteed.

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Three-Banded Italians

Stock recently imported from Italy. Queens very prolific and build up quick. Bees are gentle and great workers.

This stock guaranteed to clean up E.F.B. and stay that way.

No uncapping dead cells. Just requeen and they will do the balance.

Select Queens balance of the season, 50c each.

15% discount to dealers.

The Crowville Apiaries, Winnsboro, La.

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LEATHER COLORED ITALIAN QUEENS—SUPERIOR STOCK

50c Each

World-wide reputation for honey-gathering, hardiness, gentleness, etc., since 1879. Safe arrival and satisfaction guaranteed.

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Stoller's Thrifty Packages and Nuclei

Deliveries up to May 1.

Can furnish 4-frame nuclei, select combs, over-running with bees, in fact, young colonies prolific queens. Delivered by truck.

Write the

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Leather-colored Italians

We mate all our queens from strong standard three-frame nuclei. Large size.

Young laying queens	$ .50
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Full weight guaranteed.
Packages and Queens.

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SILVER RUN QUEENS are sterling. Try them. W. E. Streetman, Fortson, Ga.

MILLER BROTHERS—Three Rivers, Texas. Only exclusive Caucasian breeders west of the Mississippi. Packages with queens introduced.

REAL PETS—Brown's Stingless Bees. Good honey-gatherers, non-swarmers. Season's price, $1.00 for a queen; over 10, 90c each. Brown's Apiary, Cape May Court House, N. J.

FOR SALE—120 colonies clean bees, no FB or other diseases. In 10-frame hives, wfred foundation. Bees can stay here if desired. Good location. Also equipment and supers with new honey. Write to Chester Rick, Crompound Rd., Peekskill, N. Y.

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FOR SALE—6-frame Root honey extractor with power attachment. No. 1 condition. Price, $35.00. Niles Hillman, Greenwich, New York.

FOR SALE—4 and 6 frame Root extractors, hand or power; 2 2-horse power, with gas engines. All in perfect order. Greulick & Son, Scotia, New York.

NEW 2-frame reversible extractors at the price of used machines. Welded construction, can not be beat. Write for literature. Walter T. Kelley Co., Paducah, Ky.

FOUR-FRAME reversible Root extractor, both hand and power drive; two-frame reversible Root hand extractor. Both good condition. Walter Doud, Mansfield, Pa.

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WANTED—Root-Cowan two-frame extractor. State price. Chas. Stewart, Port Hope, Mich.

WANTED—Original poems, songs, for immediate consideration. Send poems to Columbian Music Publishers Ltd., Dept. P19, Toronto, Canada.

FOR SALE OR TRADE—Queen mailing cages for honey pumps, uncapping machine and capping melter. Free sample, Beeline Apiaries, R. 1, Menomonie, Wis.

THE BEE WORLD—The leading journal in Great Britain, and the only international bee review in existence. Specializes in the world's news in both science and practice of apiculture. Specimen copy, post free, 12 cents stamps. Membership of the Club, including subscription to the paper. 10/6. The Apis Club, L. Illingworth. The Way's End, Foxton, Royston, Herts, England.

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WANTED—Man for rest of season to take off honey. State age, weight, experience, and wages. Board and room free. D. B. Ellis, Unionville, Mich.

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Our LEATHER-COLORED ITALIANS cover our claims. Bred in the Helderberg mountains, they are hardy honey-gatherers. Only one high quality, 50c each, any number.

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Finest Queens, 50c Each

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Personally reared powerful GOLDEN QUEENS improved and bred UP from Italian stock. Remarkably beautiful bees, gentle, large, and CHAMPION HONEY PRODUCERS!

60c each, postpaid. 50c each, in single shipments of five or more.
Quantity discount to dealers.

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St. Bernard, P. O. Louisiana

THRIFTY

Three-Banded Italian Queens
40c each, any number.
Immediate shipment
THRIFTY bees are guaranteed to please.

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2-lb. pkg. bees with queen, $1.95; 3-lb. pkg. bees with queeens, $2.55 each.
Untested queens, 50c each.
Dealers and quantity buyers will be quoted upon request.

FOREHAND QUEENS SINCE 1893.

N FOREHAND, 341 Clake St., DeLand, Florida

Northern Bred Italian Queens

Root Queens are noted for their fine qualities—for hardiness and gentleness. Our breeding stock is constantly improved by importing high grade stock from northern Italy.

BUY ROOT QUEENS
Guaranteed Satisfaction.

LAYING ITALIAN QUEENS

1—4	5—24	25 or more
75c each	70c each	65c each

Outside U. S. A. and Canada the price is $1.00 each regardless of quantity, sent in suitable cages.
(Air express or air mail charges extra.)

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Root's Goods in Michigan

—Quantity discounts on your larger orders.

—Special Outfits of Bees and Equipment for Orchardists and Beginners.

Use Aluminum Paint this year. It's best for your equipment.

Prices quoted on application.

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Prompt Shipment

Tin Containers

60-lb. cans, bulk or cased
10-lb. and 5-lb. pails, cartons of 50
2½-lb. cans, cartons of 100

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Modernistic, Bee Hive, Cylinder and Mason design. 2½, 5, 8, 16, 22, 32 and 44 oz. capacity.

Comb Honey Packages

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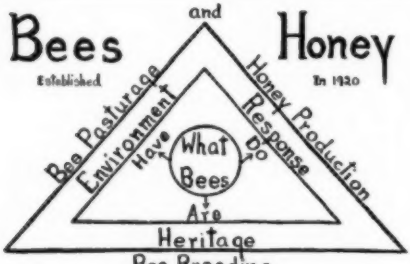

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Rivera, California.

DEALERS ATTENTION

We have a special proposition of interest to all dealers or to all beekeepers who wish to become dealers of Beekeepers' Supplies. Write for information. All goods are GUARANTEED SATISFACTORY.

Falcon Quality Products

W. T. Falconer Mfg. Company
Falconer, New York

PATENTS & TRADEMARKS
Williamson & Walton
Munsey Building
Washington, D. C.

THE TWO-QUEEN HIVE

(Continued from page 419)

it instead of the new lower entrance. To avoid confusion about the top entrance, Section B must be one or more supers higher than Section A. Bees from Section B soon become accustomed to the lower entrance, and as the season progresses the top entrance can be eliminated. The two units can be separated by moving them a few inches each time the colonies are manipulated. This method of dividing, although not as desirable as the one previously described, has given satisfactory results when it was not convenient to move the colonies to a new location.

Bright ITALIAN QUEENS

Package Bees. Shipped out the day your order is received. 2-lb. pkg. with young laying queen, $1.95 each; 3-lb., $2.55 each; additional pound bees 60c each. Queens, 50c each, 15% discount to dealers.

Taylor Apiaries, Luverne, Ala.

It's Sections that Count

in the production of Comb Honey!

CHOOSE SECTIONS MADE BY LOTZ

—For Best Quality Material!
—For Accurate and Uniform Dimensions!
—For the Smooth Dovetail and the Oval V-Grooves which mean no Loss by Breakage and Ease in Assembly!
—For that Glossier Polish which enhances the appearance of your Comb Honey!

WHEN BETTER SECTIONS ARE MADE, LOTZ WILL MAKE THEM!

A complete line of other bee supplies listed in our new 1938 catalog. Write for your free copy.

August Lotz Company
Boyd, Wisconsin

GENUINE ITALIAN

Package Bees and Queens Fresh From Our Yards to You on Time

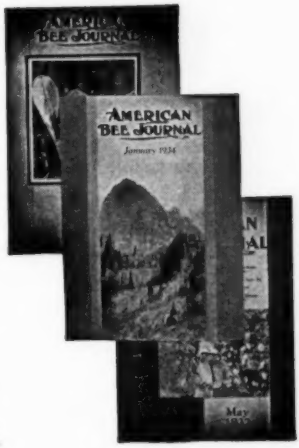
Finest Quality Queens and Package Bees—A Large Supply—Full Weight Packages—Health Certificate Furnished—Net Prices. **QUEENS, ANY NUMBER, EACH, 35c.**

2-lb. Package with Queen, each.....$1.50	2-lb. Package without Queen, each. 1.10
3-lb. Package with Queen, each..... 1.95	3-lb. Package without Queen, each. 1.55

Each additional lb. bees add 55c.

HOLDER APIARIES, Citronelle, Alabama

2 Years $1.50



American Bee Journal—monthly; published and edited by beekeepers for beekeepers. Full of pictures and tips on care of bees and selling of honey. **SAMPLE COPY FREE.**

$1.00 a year, 2 years $1.50 in U. S. A. and Canada.

Combined with Gleanings in Bee Culture—both magazines, **ONE YEAR, $1.60.** This offer good only in the United States. Address—

American Bee Journal, Hamilton, Illinois

Queens
Queens

Select Untested Italians 50c

15% discount on orders for 20 or more.

Buy queens that are reared right, with satisfaction guaranteed.

Our aim, "Once a customer, always a customer."

Alabama Apiaries
Mt. Pleasant, Alabama.

Take Advantage of
LOW
Summer Prices

Replace Those Old and Failing Queens

.. QUEENS, each 50c
Imported or Domestic stock

Also package bees
Immediate shipments

ROSSMAN & LONG
P. O. Box 133 Moultrie, Ga.

QUEENS

Yes, the best bred by test to be the best honey-gatherers that can be bought. Three kinds—Golden, three-band, and leather-colored Italians. Tested queens, 50c delivered by return mail.

FLOWERS BEE CO., Jesup, Ga.

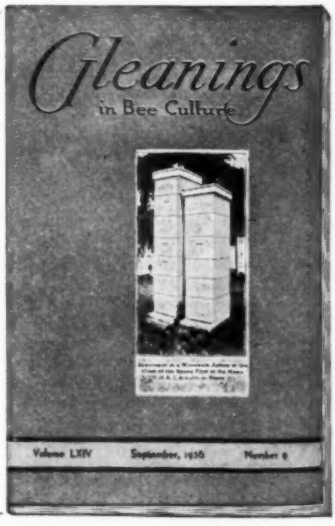
Italian Queens

Shipped within 24 hours after receipt of your order.
50c each.
CITRONELLE BEE CO.
Citronelle, Ala.

Solicit Subscriptions
Among Your Beekeeping Friends

A number of persons have written us for our offer to reliable persons. However, we still have a few localities where the right person can secure a number of subscriptions. Write for sample copies. Give references.

Circulation Manager,
Gleanings in Bee Culture
Medina, Ohio



OLD QUEENS FOR CELL-BUILDING
(Continued from page 420)

and used the larvae available. I remember now how some of those cells looked a little green when I put them out. This happened only once in several years of queen raising; but since it can happen, it is best to choose a better queen to head a cell-building colony.

JUST NEWS
(Continued from page 436)

Glebe, Chief Apiarist, Pennsylvania, "County Appropriations for Disease Control"; E. J. Anderson, Extension Apiarist, Pennsylvania State College —"Grading and Marketing"; E. G. Carr—"Detection of Failing Queens"; Mr. Holcombe, Inspector of Apiculture, New Jersey,—"Disease Identification."—Carlton T. Woodring.

• • •

The second annual Field Meet of the Madison County (Indiana) Beekeepers' Association will be held July 30 at the Peter C. Hoppes Apiary, west of Anderson on State Road 321, at the home of Mr. and Mrs. Lowell Johnson, across from the Edgwood school. Commencing at nine A. M. there will be a tour of four apiaries. Dinner at twelve. Bring your own basket. All Indiana, Ohio, Michigan, Illinois and Kentucky beekeepers are invited to attend. At one P. M., M. J. Deyell, Editor of Gleanings in Bee Culture will be the speaker. James E. Starkey will give a demonstration of transferring bees from a box hive to a modern hive. Mr. Starkey will be the judge of the honey show.—H. H. Sigler, President Madison County Beekeepers' Assoc.

The Ohio Beekeepers' Association is scheduling three district summer meetings as follows: August 10, Ohio Experiment Station, Wooster, Ohio; August 11, Bellefontaine, Ohio; August 12, Washington C. H., Ohio. Elaborate plans are underway to make these meetings unusually attractive. Out of state beekeepers are extended a cordial invitation to attend.—W. E. Dunham, Sec.

• • •

The Connecticut Beekeepers' Association will hold their annual field day on July 9, at Winchester Highland Lake Club, Winsted, Conn. A Bee-hunting Contest will be a feature.

• • •

The Arkansas Valley Beekeepers' Association will hold its annual picnic in Wichita, Kansas, on July 16, in the Park Villa in the City Park. A basket lunch will be served. There will be a short program following the lunch.

• • •

C. L. Duax, Chief Apiary Inspector for Illinois, has resigned his office and Carl E. Killion, Paris, Ill., has been appointed in charge of the inspection service.

• • •

During Massachusetts State College Farm and Home Week, July 26-29, the following beekeeping program on July 28 at Amherst is of special interest: 10-11, The cycle of the year. A discussion of the sequence of events throughout the year in beekeeping, Dr. E. F. Phillips; 11-12, Queen rearing, Allen Latham; 12-12:45, Business meeting, Federated Association Massachusetts' Beekeepers, George Meigs, presiding; 2-3, Apiary Inspection in New York State, A. C. Gould, Chief Inspector of Apiaries in New York State; 3-4, Swarm control, Dr. E. F. Phillips.—G. O. Oleson, Extension Editor.

LEATHER COLORED

ITALIAN BEES AND QUEENS

Honey producers, they are as good as any honey-gathering bee you can get from Dixie. And when you get a good queen, get it from the Dixieland, "In the Heart of Dixie".

1-10 queens ..... .50 10-50 ..... .40 100 or more ..... .35

Satisfaction Guaranteed.

Dixieland Apiaries

GREENVILLE, ALA.

XUM

Better-Bred QUEENS

Three-Banded Italians

Quality—As good as can be produced.
Quantity—A large output.
Service—Orders filled same day as received.

Any quantity, 42½c each. Write for special prices on large quantities.

CALVERT APIARIES, CALVERT, ALABAMA

←Morrison's Northern→

Three-banded or Leather-Colored Italians. Our foundation stock comes direct

→From Northern Italy←

QUEENS

Untested.....50c. Tested.....$1.00. Breeders.....$5.00

The Cloverdale Apiaries, Cloverdale, Ohio

York's Package Bees and Queens

Quality Bred Italians, and also a Limited Supply of Caucasians

PROMPT SHIPMENTS

Untested Queens, each	$ .50	Pkgs. without queens, deduct price of queens.	
Tested Queens, each	1.00	For additional lbs. of bees add 60c per lb.	
2-lb. pkg. with queen, each	1.95	For clipped queens, add 10c each extra.	
3-lb. pkg. with queen, each	2.55	15% Discount to Recognized Dealers Only.	

(The Universal Apiaries)

YORK BEE COMPANY, Jesup, Georgia, U. S. A.

THE UNIVERSAL APIARIES

Italian Queens

West Branch Apiaries' Queens have given satisfaction both in the United States and Canada for many years. All Queens reared with the utmost care and best of conditions. Satisfaction guaranteed. Price, 50c each. Also trade for new supplies or honey.

WEST BRANCH APIARIES,
Grover Hill, Ohio,

MAIL YOUR SNAP SHOTS TO APSCO—for Developing and Printing

Two Free Enlargements
One Roll Developed
Eight Glossy Prints

25c

ALLIED PHOTO SERVICE CO.
Drawer 289-C Sparta, Wis.

Caucasians

Extra gentle, prolific, long tongue, little swarming, dependable workers—30% to 40% ahead of Italians. Wintered here out-of-doors and bred in a climate like their native land—severe winters—cold windy springs—thus insuring their good qualities. Foundation stock from mountainous province of Terek, Caucasus.

Carniolans

Prolific at all times, very gentle, best of winterers, build beautifully white combs, most excellent workers. My Carniolan queens headed colonies producing 435 lbs. extracted per colony over the whole yard. 31 years' experience with them. Have supplied many State Agricultural Colleges and Experiment Stations with them. My own and Jan Strgar imported strains.

Prices—Untested queens, 1 to 6, 60c each; six or more, 50c each. Tested, $1.00 each. Breeding queens, $5.00 each.

Both races winter better than average Italians. Both races build up more readily during the unfavorable springs of our eastern and northern states and are ready for the early flow. Both these races will improve your Italians in gentleness and honey gathering. July is a good time to do general requeening.

ALBERT G. HANN

GLEN GARDNER, NEW JERSEY

Mack's QUEENS

(They Speak for Themselves)

3-Band Italians

Twenty-three years as a breeder enables us to produce queens of the **Highest Quality.** Many of our customers who have shopped around declare "Mack's queens are the Tops". We guarantee all queens to be purely mated, to be free of all infectious or contagious diseases and to give entire satisfaction. They have to make **Good** or MACK does. You Can't go Wrong with MACK.

Prices balance of season
50c each.

Herman McConnell

(The Bee & Honey Man)
Robinson, Rte. 2. Illinois

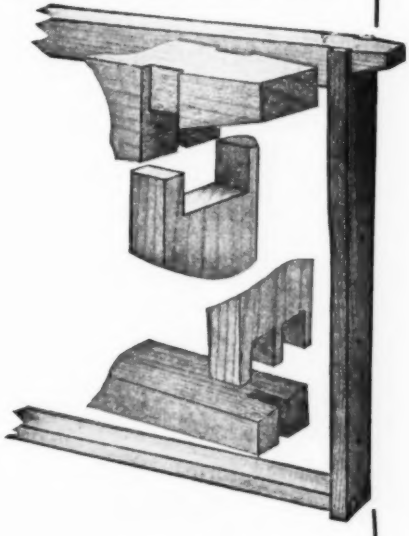
Easy to Assemble

Root QUALITY

Triple-locked Corner

FRAMES

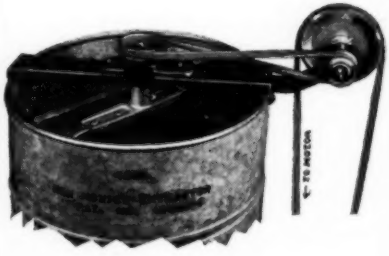
Strong
Rigid



See Your Root Dealer

Power Attachment For Hand Extractors

Easy to Install.



Motor-driven Extractors give you higher speed for longer time, therefore more honey with no effort. **Big Time Saver.**

Silent, Efficient, Durable

Power Attachment—Price $4.75
For your Extractors Nos. 4005, 4007, 4035, 4215 and 4217 that have been already purchased.

Motor not included in price

Equipped with Power Drive
4055, $16.70; 4057, $19.50; 4135, $18.70; 4015, $26.00; 4017, $30.00.

The A. I. Root Co.
Medina, Ohio

Root QUALITY Bee Supplies

A CONFAB

(Continued from page 439)

Your editorial on page 96 on unbalanced conditions, seems on the right track and if a queen persisted in putting a strain on the honey bank, would it not be wise for the bees to take a breather by requeening?

I think M. N. Freeland's idea about grafted cells wide of the mark, and if Banta & Wire of Redding, Cal., from whom I received these packages, follow the grafting method, then I am quite satisfied.

A. W. Rigler,
Courtenay, B. C.

In Defence of the Goldens

Of late there has been some discussion on the merits of different strains of Italian bees. It would seem that we should clarify our ideas as to what constitute golden, three-banded and leather-colored bees. Mr. Rudolf Spoerri in a recent letter has the following to say:

So much has been written lately in different journals about the inferiority of the golden bee as compared to other strains, the authors being mainly bee breeders of the darker races, in other words, "knockers", that all too seldom do we hear the views of the honey producer; not the queen breeder or the queen and honey producer, but the strictly honey producer, who after all should be the final and supreme judge where the merits and demerits of different strains of bees are concerned.

We are not knocking the dark bee! If you are dealing with a reputable breeder of dark bees and he gives you satisfaction, by all means stick to him. If he is conscientious he will give you a good bee, his product will speak for itself, and he will not have to go around knocking the golden bee. He is giving you the best he has, and you owe it to yourself to stand by him. The same identical thing applies to the breeder of goldens. Naturally not all breeders of the golden bee produce a superior strain. But the number of inferior breeders of goldens does not run any higher on an average than does the number of inferior breeders who produce the darker strains; in fact, the producer of inferior goldens will lose out much sooner than if he breeds a bee that cannot be as easily identified by its color, for the simple reason that it is far easier to keep track of a bee distinctive in its markings as is the golden bee.

We were not prompted to write this article with the intention of getting free advertising publicity; we are but defending our own golden bees in com-

pliance with the urgent requests of the many honey producers from different sections of the United States and Canada who have written us in the past two months and asked that we say a good word for the golden bee. We are repeating verbally as nearly as possible the different facts these honey producers have asked us to state regarding the golden bees, of their remarkable gentleness, minimized inclination to swarm, the large colonies they produce and subsequent honey records, both for extracting purposes and sections, their splendid ability to come through severe winters, and of their adaptability to the different climates and flora of this continent. Because after all, it is truly an American Bee devoloped right here in this country and bred up from original Italian stock over a long period of years.

HONEY PRODUCER, never let anyone super-impose his ideas upon yours! Your own individual mind is more infallible to you in solving your own problems! Be your own judge! Get the same number of queens of different strains, introduce them into hives as nearly as possible of the same strength and watch the results. "Seeing for yourself is believing'"!

Rudolf Spoerri,
St. Bernard, P. O., Louisiana.

ASKED AND ANSWERED

(Continued from page 453)

of combs of crystallized honey is to put them in brood chambers of colonies of bees during the spring and summer months. If you put two or three combs into each brood chamber, the bees will gradually work over the honey. Of course, the warm weather, together with the hive temperature of the brood chamber will have a tendency to liquefy the honey in the combs. The bees may remove some of the crystals and drop them on the floor of the hive. However, most of this crystallized honey will be utilized by the bees. So long as you do not give any one colony too many combs of this crystallized honey, normal colonies will utilize it to good advantage before the end of the season. It would do no harm to score the cappings of the combs with a hive tool before the combs are given to strong colonies. This would naturally induce the bees to start removing granulated honey from the combs.

Wise Beekeepers

Do not keep poor queens. Why not requeen with Merrill's queens and be a wise beekeeper? If you have empty hives, put them in service while package bees are cheap.

—PRICES—

Untested Italian Queens
1 to 10, .50c each
10 to 50, .40c each
100 or more, .35c each

BEES

2-lb. packages with queens, . . $1.50 each
3-lb. packages with queens, . . 2.00 each

Merrill Bee Company

Bucatunna, Mississippi

ROOT SERVICE From CHICAGO

Take it away

GOOD CROP

Get it in the cans and cases. It is a good season—good plants, moisture, and weather conditions. Beekeepers will make it a good season by giving daily attention to the bees this month. Give the bees plenty of room for storing nectar and ripening honey.

Do you need supers, sections, frames, foundation etc.?
Do you need extractors, tanks, uncapping knives, strainers, etc.?
Do you need cans and pails, glass jars, cartons, and wrappers, shipping cases, etc.?

Send your orders where quick shipments may be made.
We keep a full stock of all supplies. **We give service.** Our Root Catalog and Container Price List free for the asking.

A. I. Root Co. of Chicago

224 West Huron Street
CHICAGO, ILLINOIS

XUM

Hollopeter's QUEENS

Can now be had for the twenty-eighth successive season. Carefully reared from prolific, heavy producing three-banded Italian stock. Safe arrival and satisfaction assured. Untested queens, one for 60c; two or more, at fifty cents each. Young tested queens, $1.00 each.

White Pine Bee Farms
Rockton, Pa.

* ATTENTION *

This little ad may be hard to see and you may overlook it but you can't overlook the value of STEVENSON'S line-bred GOLDENS. They won't let you. Descriptive circular supplied.

Queens, 50c; 2-lb. pkg. with queen, $1.95; 3-lb., $2.65.

STEVENSON'S APIARIES,
Westwego, La.

Genuine Three-Banded Italians

For a fine crop of honey try our bees and queens. They work fine in cool, damp weather, and are very gentle. Satisfaction guaranteed, and no disease of any kind. Write for circular about our bees.

Untested Queens, any number, each....$ .50
Tested Queens, any number, each..... 1.00
2-lb. pkg. bees with queen, any number, ea. 1.95
3-lb. pkg. bees with queen, any number, ea. 2.55
15% discount to dealers.

ALAMANCE BEE COMPANY
Geo. Elmo Curtis, Mgr., Graham, N. C.

Smith's Queens

None better.

50c each. 15% discount to dealers.

N. B. Smith & Co.

Calhoun, Alabama.

Free Promotion Helps!

INSTITUTE MEMBERS:

1—You will receive in July the CONTEST-HARVEST WEEK issue of Institute Inklings giving full details of Honey Harvest Week and the National Honey Recipe Contest programs.

2—A quantity of streamers (up to 50) for store advertising during Honey Harvest Week, October 24-29, will be available free upon request.

3—A quantity of contest rules (up to 50) for distribution to customers and friends will be available free upon request.

NON-MEMBERS:

1—Your membership, new or renewal, sent in now will entitle you to the promotion helps listed above.

2—Your name will be placed on our mailing list for later releases sent out during the year.

AMERICAN HONEY INSTITUTE
Madison, Wisconsin

I will distribute —— copies of the Contest Rules to my customers.

I will place —— Harvest Week streamers in stores and store windows during Honey Harvest Week, October 24-29.

Please forward these to me as soon as they are ready for distribution.

[ ] I am now an Institute Member.

[ ] My membership of $—— (new, renewal) is enclosed.

NAME .....

Street.....City.....State.....

(Use this coupon for an order blank)

(This space donated to American Honey Institute by Gleanings in Bee Culture)

The Head of the House

Is Most Important

The Head of the Hive

Is the QUEEN

Without a queen you will soon have no bees.
With a poor queen you will likely have no honey.
Get those old ones out before they fail completely.

Replace them with

STOVER'S QUEENS

and be assured of complete satisfaction.

50c each

15% discount to dealers

The Stover Apiaries, Mayhew, Miss.

1938 Bumper Crop of Honey

To be Sold

30 Attractive Labels

New Designs

Get your supply of beautiful honey labels now so that you can put your honey on the market at an early date---get the high price.

Root QUALITY Bee Supplies

The A. I. Root Company
Medina, Ohio

XUM

Mountain Gray Caucasian Bees

They are hardy, long-tongued, and long-lived, and produce a honey crop when others fail.

Select young queen bees, 50c balance of season.

Write for circular and package bee prices. If you want genuine Caucasians

CAUCASIAN APIARIES

Brooklyn, Alabama

is the place to get them.

"YES"

Queens via Return Mail

No delays. I ship when you want them.

Price List

Select Untested Queens, 50c each.

Select Tested, $1.00 each

15% Discount to Dealers

All Queens Guaranteed Purely Mated

W. E. Harrell

Formerly Hayneville Apiary Co.

HAYNEVILLE Alabama

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